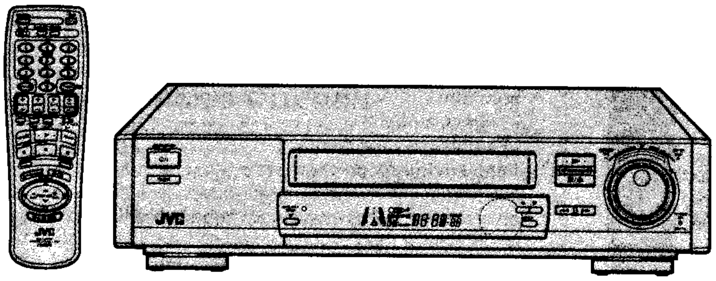
JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-S9400E



Hi-Fi S-VHS 625

TIME SCAN

ShowView

G-CODE

SPECIFICATIONS

GENERAL

Power requirement : AC 220 - 240 V∿, 50/60 Hz
Power consumption : 27 W (HR-S9400E)

Temperature
  Operating : 5°C to 40°C
  Storage : -20°C to 60°C
Operating position : Horizontal only
Dimensions (WxHxD) : 465 x 105 x 353 mm
Weight : 5.6 kg
Format : S-VHS/VHS PAL standard
Maximum recording time
  (SP) : 240 min. with E-240 video cassette
  (LP) : 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system : PAL-type colour signal and CCIR monochrome signal,625 lines 50 fields
Recording system : DA4 (Double Azimuth) head helical scan system
Signal-to-noise ratio : 45 dB
Horizontal resolution : 250 lines (VHS)
: 400 lines (S-VHS)
Frequency range : 70 Hz to 10,000 Hz (Normal audio)
20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output : 21-pin scart connectors : IN/OUT x 1, IN/DECODER x 1
RCA connectors:
VIDEO IN x 1, AUDIO IN x 2, AUDIO OUT x 1
S-Video connectors:
IN x 1, OUT x 1

TUNER/TIMER

TV channel storage capacity : 99 positions (+AUX position "AU")
Tuning system : Frequency synthesized tuner
Channel coverage
  (Europe) : VHF 47 - 89/104 - 300/302 - 470MHz
  UHF 470 - 862MHz
  (Australia) : CH0 - 5, 5A, CATV
  CH6 - 12, CATV
  CH28 - 69
  (New Zealand) : CH1 - 3, CATV
  CH4 - 11, CATV
  CH21 - 69
Aerial output : UHF channels 22 - 69 (Adjustable)
Memory backup time : Approx. 60 min.

ACCESSORIES

Provided accessories : RF cable,
Infrared remote control unit,
"R6" battery x 2,
Input cable adapter*,
Output cable adapter*,
S-Video cable, Audio cable

* Provided in Australia and New Zealand only.

Specifications shown are for SP mode unless otherwise specified.
E.& O.E. Design and specifications subject to change without notice.

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No.82608
July 1997

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded(▨) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

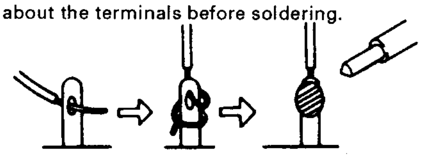


Fig. 1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10–15 kg of force in any direction will not loosen it.

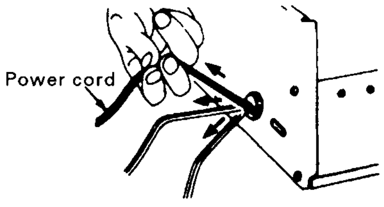


Fig. 2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

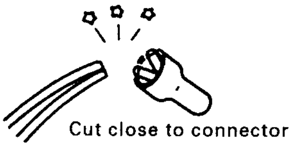


Fig. 3

       (2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

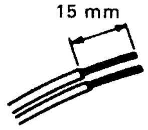


Fig. 4

       (3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

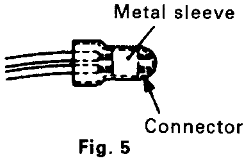


Fig. 5

       (4) As shown in Fig. 6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

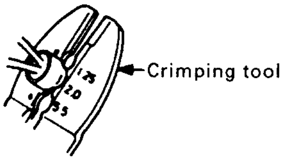


Fig. 6

       (5) Check the four points noted in Fig. 7.

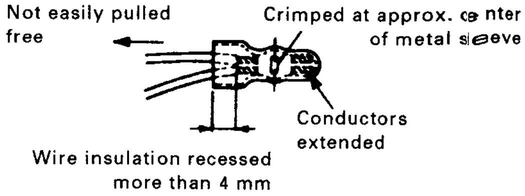

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig. 7

●Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 bellow.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 bellow.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

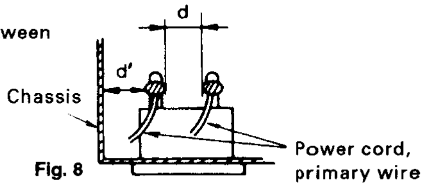


Fig. 8

4. **Leakage current test**
   Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
   Measuring Method : (Power ON)
   Insert lord Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

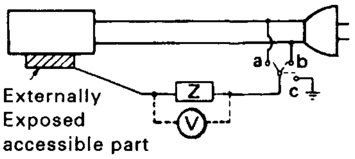


Fig. 9

5. **Grounding (Class I model only)**
   Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
   Measuring Method :
   Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

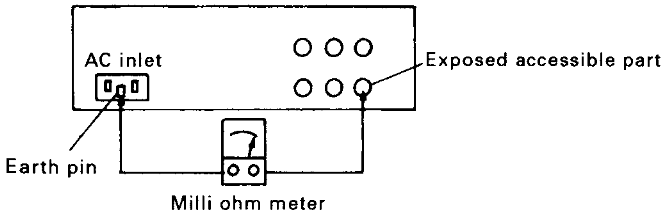


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ /500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	—	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ /500 V DC	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

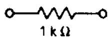
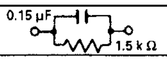
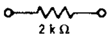
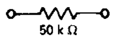
AC Line Voltage	Region	Lord Z	Leakage Current (i)	a, b, c
100 V	Japan	 1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	 0.15 µF 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	 2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		 50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current Specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

Safety Precautions

The rating plate and the safety caution are on the rear of the unit.

WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION

- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the mains outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the mains outlet prior to connecting or disconnecting any signal lead or aerial.

WARNING

There are two different types of SECAM colour systems: SECAM-L, used in FRANCE (also called SECAM-West), and SECAM-B, used in Eastern European countries (also called SECAM-East).

1. This recorder can also receive SECAM-B colour television signals for recording and playback.
2. Recordings made of SECAM-B television signals produce monochrome pictures if played back on a video recorder of SECAM-L standard, or do not produce normal colour pictures if played back on a PAL video recorder with SECAM-B system incorporated (even if the TV set is SECAM-compatible).
3. SECAM-L prerecorded cassettes or recordings made with a SECAM-L video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used for the SECAM-L standard. Use a SECAM-L recorder to record SECAM-L signals.

For Italy:

"It is declared that this product, brand JVC, conforms to the Ministry Decree n. 548 of 28 Aug.'95 published in the Official Gazette of the Italian Republic n. 301 of 28 Dec.'95"

S-VHS 625

G-CODE SHOWVIEW

- Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".
- With this recorder, the G-Code system is identified as "SHOWVIEW" and is operated using the "SHOWVIEW" on screen menu.

  SHOWVIEW is a registered trademark of Gemstar Development Corporation. The SHOWVIEW system is manufactured under licence from Gemstar Development Corporation.

  G-Code is a trademark of Gemstar Development Corporation. *The G-Code system is manufactured under license from Gemstar Development Coporation.*
- Certain audio features of this product manufactured under a license from Desper Products, Inc. Spatializer® is a trademark owned by Desper Products, Inc.

IMPORTANT

- Please read the various precautions on this page before installing or operating the recorder.
- It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

The STANDBY/ON ⏻/I button does not completely shut off mains power from the unit, but switches operating current on and off. " ⏻ " shows electrical power standby and " I " shows ON.

Video tapes recorded with this video recorder in the LP (Long Play) mode cannot be played back on a single-speed video recorder.

Failure to heed the following precautions may result in damage to the recorder, remote control or video cassette.

1. **DO NOT place the recorder . . .**
   ... in an environment prone to extreme temperatures or humidity.
   ... in direct sunlight.
   ... in a dusty environment.
   ... in an environment where strong magnetic fields are generated.
   ... on a surface that is unstable or subject to vibration.
2. **DO NOT block the recorder's ventilation openings.**
3. **DO NOT place heavy objects on the recorder or remote control.**
4. **DO NOT place anything which might spill on top of the recorder or remote control.**
5. **AVOID violent shocks to the recorder during transport.**

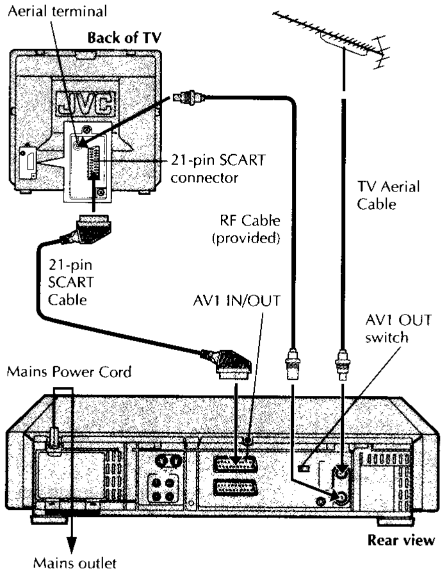
MOISTURE CONDENSATION

Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, or under extremely humid conditions—just as water droplets form in the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the recorder turned on for a few hours to let the moisture dry.

ABOUT HEAD CLEANING

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Be sure to contact your nearest JVC dealer if such troubles occur.

Basic Connections



AV1 OUTPUT SIGNAL SELECTION

The AV1 IN/OUT connector accepts only a composite signal (regular video signal), but can deliver either a composite video signal or a Y/C signal (a signal in which the luminance and chrominance signals are separated) according to the setting of the rear panel AV1 OUT switch.

- If your TV's SCART connector is compatible only with the regular video signal, set this switch to COMP.
- If your TV's SCART connector is compatible with the Y/C signal, set this switch to Y/C. You will better enjoy high-quality S-VHS pictures.

IMPORTANT:

- Set your TV to the VIDEO (or AV), Y/C, or RGB mode according to the type of your TV's SCART connector.
- For switching the TV's mode, refer to the instruction manual of your television.

It's essential that your video recorder be properly connected. Follow these steps carefully. THESE STEPS MUST BE COMPLETED BEFORE ANY VIDEO OPERATION CAN BE PERFORMED.

1 CHECK CONTENTS

Make sure the package contains all of the accessories listed in "Specifications" (☞ pg. 63).

2 SITUATE RECORDER

Place the recorder on a stable, horizontal surface.

3 CONNECT RECORDER TO TV

The connection method you use depends on the type of TV you have.

RF CONNECTION

- *To Connect To A TV With NO AV Input Terminals . . .*
  - a– Disconnect the TV aerial cable from the TV.
  - b– Connect the TV aerial cable to the ANT. IN jack on the rear panel of the recorder.
  - c– Connect the provided RF cable between the RF OUT jack on the rear panel of the recorder and the TV's aerial terminal.

Before operating the recorder, make sure the TV's channel is set to the VIDEO channel (☞ pg. 10).

AV CONNECTION

- *To Connect To A TV With AV Input Terminals . . .*
  - a– Connect the aerial, recorder and TV as per "RF CONNECTION".
  - b– Connect an optional SCART cable between the AV1 IN/OUT socket on the rear panel of the recorder and the TV's 21-pin SCART connector. If you are using this recorder in Australia or New Zealand, see "For Customers in Australia and New Zealand" on this page.
  - c– Choose the appropriate AV1 output signal (☞ "AV1 OUTPUT SIGNAL SELECTION" on this page).

S-VIDEO CONNECTION

- *If you have a TV with S-VIDEO input terminals, see "S-VIDEO Connection" on page 4.*

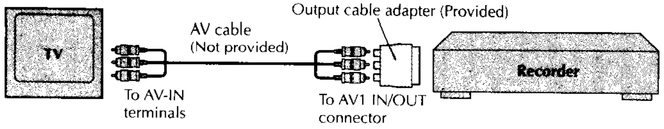
4 CONNECT RECORDER TO MAINS

Plug the end of the mains power cord into a mains outlet.

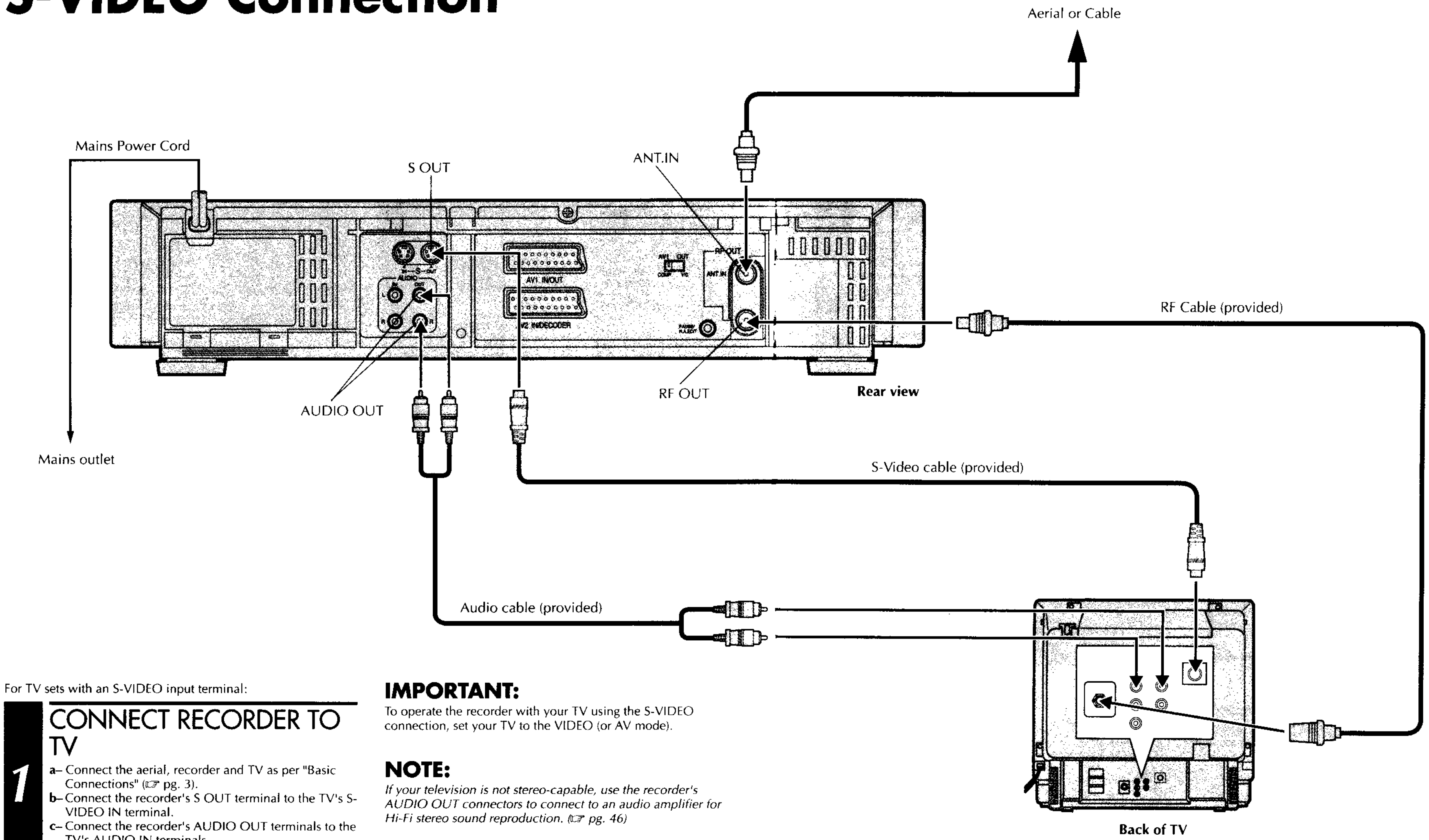
After you plug the mains power cord into a mains outlet, the Country Set display appears on the TV screen and/or on the recorder's front display panel when the ⏻/I button on the recorder/remote control is pressed for the first time to power on the recorder; go to page 6 to perform Auto Set Up.

For Customers in Australia and New Zealand

Connect an optional AV cable between the TV's AV-IN terminals and the AV1 IN/OUT connector on the rear panel of the recorder via the provided output cable adapter as illustrated.



S-VIDEO Connection


Aerial or Cable
Mains Power Cord
S OUT
ANT.IN
AV1 IN/OUT
AV2 IN/DECODER
RF OUT
ANT.IN
RF Cable (provided)
RF OUT
Rear view
AUDIO OUT
Mains outlet
S-Video cable (provided)
Audio cable (provided)
Back of TV

For TV sets with an S-VIDEO input terminal:

1 CONNECT RECORDER TO TV

a– Connect the aerial, recorder and TV as per "Basic Connections" (☞ pg. 3).
b– Connect the recorder's S OUT terminal to the TV's S-VIDEO IN terminal.
c– Connect the recorder's AUDIO OUT terminals to the TV's AUDIO IN terminals.

2 CONNECT RECORDER TO MAINS

Plug the end of the mains power cord into a mains outlet.

IMPORTANT:

To operate the recorder with your TV using the S-VIDEO connection, set your TV to the VIDEO (or AV mode).

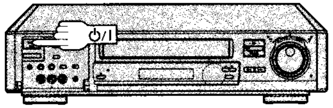
NOTE:

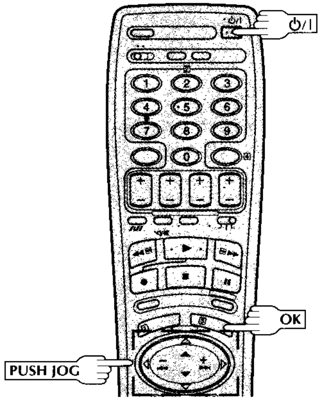
If your television is not stereo-capable, use the recorder's AUDIO OUT connectors to connect to an audio amplifier for Hi-Fi stereo sound reproduction. (☞ pg. 46)

After you plug the mains power cord into a mains outlet, the Country Set display appears on the TV screen and/or on the recorder's front display panel when the ⏻/I button on the recorder/remote control is pressed for the first time to power on the recorder; go to page 6 to perform Auto Set Up.

Auto Set Up

Auto Channel Set/Auto Clock Set/Auto Guide Program Number Set





International Telephone Country Code

SUOMI	: 358	SUISSE	: 41
PORTUGAL	: 351	ITALIA	: 39
DEUTSCHLAND	: 49	ESPAÑA	: 34
NORGE	: 47	BELGIUM	: 32
SVERIGE	: 46	NEDERLAND	: 31
DANMARK	: 45	GREECE	: 30
ÖSTERREICH	: 43	OTHERS	: - -

* Depending on the model, the selectable codes may be limited.

ATTENTION

Once you have performed Auto Set Up, even if the recorder's memory backup has expired, all the stored stations and their Guide Program numbers remain in the recorder's memory and the recorder will not perform Auto Set Up again. You only need to set the clock. (☞ pg. 55)

If you have moved to a different area, perform each setting as required.

- Tuner setting ☞ pg. 50
- Clock setting ☞ pg. 55
- *ShowView Guide Program number setting ☞ pg. 12*

If a new station starts broadcasting in your area, perform both tuner setting (☞ pg. 50) and ShowView Guide Program number setting (☞ pg. 12).

When the ⏻/I button on the recorder/remote control is pressed for the first time to power on the recorder after you plug the mains power cord into a mains outlet, the Country Set display will appear on the TV screen and the recorder's front display panel. By simply selecting your country*, the Auto Set Up function sets the tuner channels, clock and Guide Program numbers automatically.

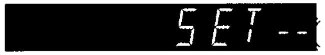
* If you live in Belgium or Switzerland, you also need to select the language you use.

You can refer to the front display panel and/or the on-screen display to perform this procedure.

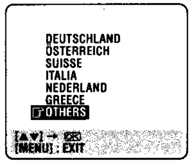
Before starting, make sure of the following:
- The TV aerial cable should be connected to the recorder.
- The recorder's mains power cord should be connected to a mains outlet. ☞ pg. 3
- If you want to use the on-screen display, the TV should be set to its AV mode (with AV or S-VIDEO connection ☞ pg. 3 or 4) or UHF channel 36 (with RF connection ☞ pg. 3).

1 TURN ON THE RECORDER

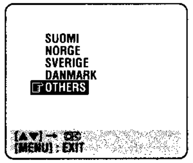
Press ⏻/I on the recorder or remote control. The Country Set display appears on the front display panel and/or on the screen.



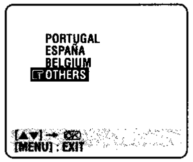
For HR-S9400E


DEUTSCHLAND
ÖSTERREICH
SUISSE
ITALIA
NEDERLAND
GREECE
☞OTHERS
[▲▼] → OK
[MENU] : EXIT

For HR-S9400EH


SUOMI
NORGE
SVERIGE
DANMARK
☞OTHERS
[▲▼] → OK
[MENU] : EXIT

For HR-S9400EH


PORTUGAL
ESPAÑA
BELGIUM
☞OTHERS
[▲▼] → OK
[MENU] : EXIT

* The on-screen display differs for the HR-S9400EH depending upon the country in which the product was purchased.

NOTE:

If you have connected your TV to the recorder with RF connection and the on-screen display appearing on UHF channel 36 looks distorted, perform this procedure referring to the front display panel.

2 SELECT COUNTRY

If you are referring to the front display panel

Press **PUSH JOG**△▽ to select your international telephone country code of your country referring to the chart in the left column.

- If you have selected a country code other than 32 (BELGIUM) or 41 (SUISSE), go to step **4**.
- If you have selected 32 (BELGIUM) or 41 (SUISSE), go to step **3**.

CONTINUED ON NEXT PAGE.

If you are referring to the on-screen display

Press **PUSH JOG**△▽ to move the highlight bar (pointer) to your country's name.
- If you have selected a country other than BELGIUM or SUISSE, go to step **4**.
- If you have selected BELGIUM or SUISSE, go to step **3**.

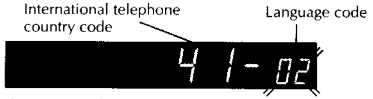
3 SELECT LANGUAGE

Press **OK**. the Language Set display appears on the front display panel and/or on the screen.

If you are referring to the front display panel

Press **PUSH JOG**△▽ to select your language code referring to the chart in the left column.

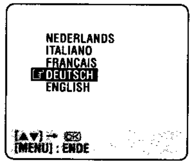
(Ex.) DEUTSCH is selected for SUISSE



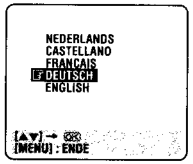
If you are referring to the on-screen display

Press **PUSH JOG**△▽ to move the highlight bar (pointer) to the language of your choice.

For HR-S9400E


NEDERLANDS
ITALIANO
FRANCAIS
☞DEUTSCH
ENGLISH
[▲▼] → OK
[MENU] : ENDE

For HR-S9400EH


NEDERLANDS
CASTELLANO
FRANCAIS
☞DEUTSCH
ENGLISH
[▲▼] → OK
[MENU] : ENDE

4 PERFORM AUTO SET UP

Press **OK**.

"Auto" appears on the display panel and blinks; do NOT press any button on the recorder or remote control until the display panel shows the current time or "CH1" or "--:--". (Refer to box on this page.)

- Auto channel set function takes place first; it assigns automatically all receivable stations in your area.
- Auto clock set function sets the clock automatically by reading the clock setting data from a station transmitting a PDC signal while auto channel set is being performed.
- During auto channel set, the recorder recognizes each station name of the detected stations and stores them in the recorder's memory, then automatically sets ShowView assigned Guide Program number for those stations according to the broadcast area.

NOTE:

In the area where no TV station transmits a PDC signal, the recorder can perform neither auto clock set nor auto Guide Program number set.

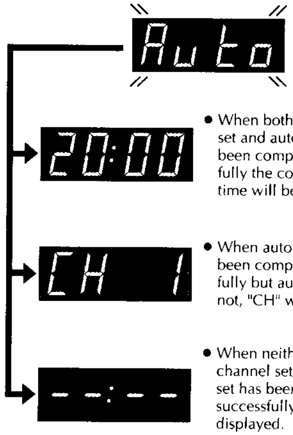
Language Code for the HR-S9400E

ENGLISH	: 01	ITALIANO	: 04
DEUTSCH	: 02	NEDERLANDS	: 05
FRANCAIS	: 03		

Language Code for the HR-S9400EH

ENGLISH	: 01	CASTELLANO	: 04
DEUTSCH	: 02	NEDERLANDS	: 05
FRANCAIS	: 03		

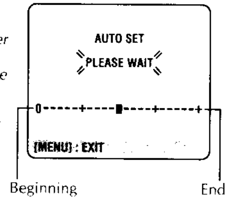
Auto Set Up results appear on the front display panel



- When both auto channel set and auto clock set have been completed successfully the correct current time will be displayed.
- When auto channel set has been completed successfully but auto clock set has not, "CH" will be displayed.
- When neither auto channel set nor auto clock set has been completed successfully, "--:--" will be displayed.
- If Auto Set Up is completed, go to page 8.

NOTES:

- *If you are using the on-screen display, the AUTO SET screen will appear after pressing **OK** in step **4**. As Auto Set Up progresses, the "■" mark on the screen moves from left to right.*
- *If there is a power cut, or if you press ⏻/I or **MENU** while Auto Set Up is in progress, Auto Set Up will be interrupted; be sure to turn off the recorder power once and try again from step **1**.*


AUTO SET
PLEASE WAIT
[MENU] : EXIT

If both auto channel set and auto clock set have been performed successfully:

1 *Perform "Video Channel Set" on page 10.*

2 Turn on the TV and select its VIDEO channel or AV mode, then make sure that all necessary stations have been stored in the recorder's memory by using the **TV PROG** button(s).
- If station names (ID — ☞ pg. 54) have also been stored in the recorder's memory, the station name will be displayed at the top left corner of the screen for about 5 seconds when the recorder is tuned to a different station.
- If you want to set the tuner manually such as to add or skip channels, to change channel positions, or to set or change station names, see pages 52 – 53.

3 Perform "ShowView Setup" on page 12 to check if the Guide Program numbers have been set correctly.

If auto channel set has succeeded but auto clock set has not:

1 Perform "Video Channel Set" on page 10.

2 Turn on the TV and select its VIDEO channel or AV mode, then make sure that all necessary stations have been stored in the recorder's memory by using the **TV PROG** button(s).
- If station names (ID — ☞ pg. 54) have also been stored in the recorder's memory, the station name will be displayed at the top left corner of the screen for about 5 seconds when the recorder is tuned to a different station.
- If you want to set the tuner manually such as to add or skip channels, to change channel positions, or to set or change station names, see pages 52 – 53.

3 Perform "Clock Set" on page 55, then "ShowView Setup" on page 12 to check if the Guide Program numbers have been set correctly.

If both auto channel set and auto clock set have failed:

1 Make sure the TV aerial cable is connected properly to the recorder and turn off the recorder power once, then turn the recorder power back on again.
- The Country Set display appears on the front display panel and/or on the screen; perform steps **2** and **4** on pages 6 – 7 again.

IMPORTANT

- Depending on the reception conditions, the station names may not be stored correctly, and auto Guide Program Number Set may not work properly. If the Guide Program numbers are not set properly, ShowView timer recording (☞ pg. 28) will not work correctly; be sure to check if the Guide Program numbers have been set correctly (☞ pg. 12, "ShowView Setup").
- Since your video recorder memorizes all detected stations even if the reception condition is poor, some of those stored stations may produce a noisy picture. To delete those stations, ☞ "Delete A Channel" on page 52.

INFORMATION

Language for the on-screen display

Auto Set Up also selects the language automatically for the on-screen display depending on the Country setting you have made in step **2** on page 4 (unless you have selected BELGIUM or SUISSE), as shown below.

SUOMI	→	SUOMI	SVERIGE	→	SVENSKA	ESPAÑA	→	CASTELLANO
PORTUGAL	→	ENGLISH	DANMARK	→	DANSK	NEDERLAND	→	NEDERLANDS
DEUTSCHLAND	→	DEUTSCH	ÖSTERREICH	→	DEUTSCH	GREECE	→	ENGLISH
NORGE	→	NORSK	ITALIA	→	ITALIANO	OTHERS	→	ENGLISH

If you want to change the language setting manually, ☞ "Language" on page 9.

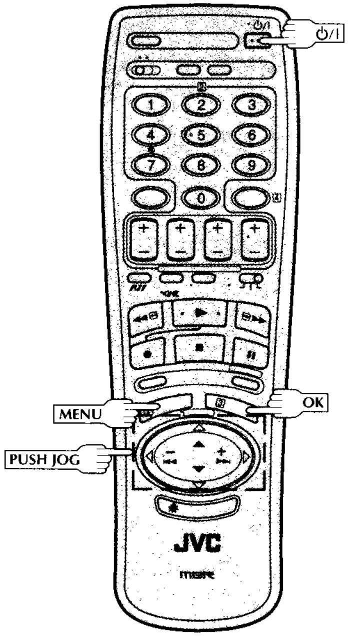
Just Clock

Your recorder is equipped with the Just Clock function which provides accurate time keeping through automatic adjustments at regular intervals, by reading data from a PDC signal. If you want to take advantage of this function, simply set it to "ON".
☞ "Just Clock" on page 55.

Language

This recorder offers you the choice to view on-screen messages in 10 different languages. Though Auto Set Up selects the language automatically (☞ pg. 8), you can change the language setting manually using this procedure as required.

- Be sure to set your Video Channel before performing Language setting (☞ pg. 10).
- Turn on the TV and select the VIDEO channel (or AV mode).



1

TURN ON THE RECORDER

Press ⏻/I.

2

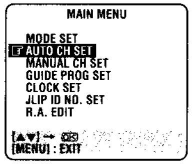
ACCESS MAIN MENU

Press **MENU** twice.

3

ACCESS COUNTRY SET SCREEN

Press **PUSH JOG**△▽ to move the highlight bar (pointer) to "AUTO CH SET", then press **OK**.



4

SELECT COUNTRY

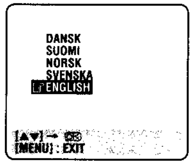
Press **PUSH JOG**△▽ to move the highlight bar (pointer) to your country's name, then press **OK**. The Language Set screen appears.

5

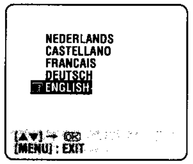
SELECT LANGUAGE

Press **PUSH JOG**△▽ to move the highlight bar (pointer) to the language of your choice.

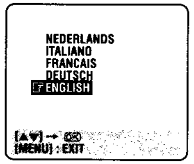
For HR-S9400EH



For HR-S9400EH



For HR-S9400E



* The on-screen display differs for the HR-S9400EH depending upon the country in which the product was purchased.

- You do not have to press **OK**; pressing **OK** starts Auto Channel Set.

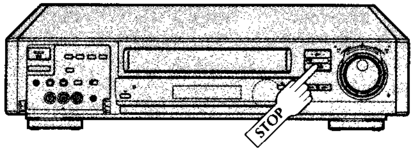
6

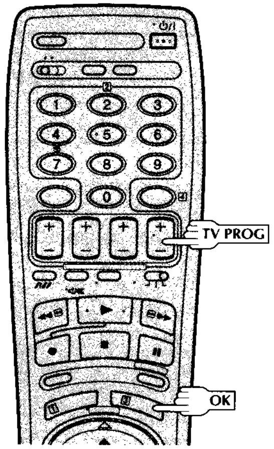
RETURN TO NORMAL SCREEN

Press **MENU**.

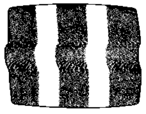
Video Channel Set

Video Channel (RF Output Channel) is the channel on which your TV receives picture and sound signals from the video recorder through the RF cable.





TEST SIGNAL



The channel on which the screen to the left appear clearly in step 2 is your Video Channel.

To view picture signals from the video recorder, set your TV to the Video Channel.

If you have connected the video recorder to your TV via the provided RF cable only (RF connection) – Go to "With RF Connection" below.

If you have connected the video recorder to your TV via both the provided RF cable and a 21-pin SCART cable (AV connection) or via the provided RF cable, the provided S-Video cable and the provided audio cable (S-VIDEO connection) – Go to "With AV or S-VIDEO Connection" on next page.

IMPORTANT:
Before performing the following steps, make sure the recorder's power is off and there is no cassette inserted in the recorder.

With RF Connection

1 ACCESS VIDEO CHANNEL SET MODE

Hold down **STOP** on the recorder until the display panel shows the following.

_OUT 36

2 SET VIDEO CHANNEL

Set your TV to UHF channel 36.

- If the two vertical white bars appear clearly on the screen as shown in the illustration at bottom left, go to step **3**.
- If the two vertical white bars do not appear clearly, press **TV PROG** + or – to set the video recorder to a vacant channel between 22 and 69 which is not occupied by any local station in your area.

(Ex.) If channel 50 is available in your area

_OUT 50

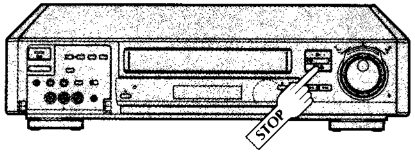
Then set your TV to UHF channel 50 and check if the two vertical white bars appear clearly on the screen; if so, go to step **3**. If not, re-set the video recorder to another vacant channel and try again.

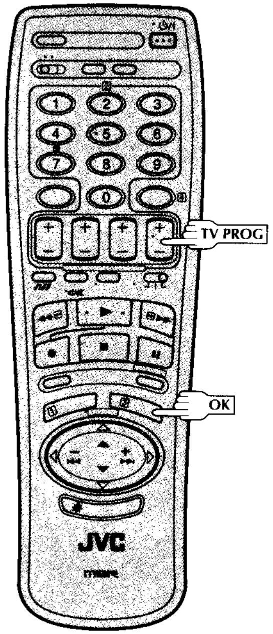
NOTES:

- *If you set the video recorder to a channel which is occupied by a local station or has neighbouring channels that are occupied by local stations, the picture reception quality will be affected and some interference noise will appear on the TV screen. Be sure to select a vacant channel which has no broadcast on neighbouring channels.*
- *If you cannot obtain the two vertical white bars clearly with any channel between 22 and 69, consult your JVC dealer.*

3 EXIT VIDEO CHANNEL SET MODE

Press **OK**.





IMPORTANT:
Before performing the following steps, make sure the recorder's power is off and there is no cassette inserted in the recorder.

With AV Or S-VIDEO Connection

1 ACCESS VIDEO CHANNEL SET MODE

Hold down **STOP** on the recorder until the display panel shows the following.

_OUT 36

2 SET VIDEO CHANNEL

Press **TV PROG** – until the display panel shows "_OUT– –".

_OUT --

- Now the video channel is set to off.

3 EXIT VIDEO CHANNEL SET MODE

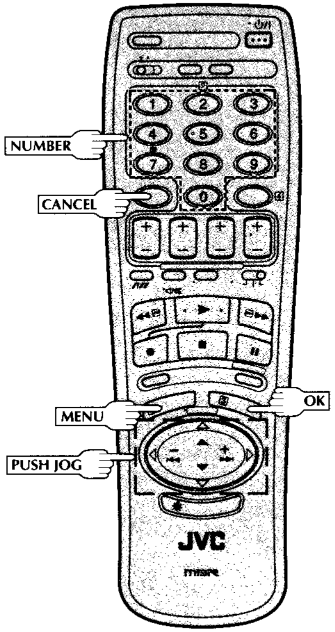
Press **OK**.

To view picture signals from the video recorder, set your TV to its AV mode.

SHOWVIEW Setup

Turn on the TV and select the VIDEO channel (or AV mode).

* **For Customers in Australia and New Zealand:**
With this recorder, the G-Code system is identified as "SHOWVIEW".


NUMBER
CANCEL
MENU
OK
PUSH JOG
JVC

With SHOWVIEW, timer programming is greatly simplified because each TV programme has a corresponding code number which your recorder is able to recognise.

NOTE:

"Guide Program (GUIDE PROG) Number" refers to the assigned TV station numbers, according to broadcast area, for SHOWVIEW timer recording.

IMPORTANT

Perform the following procedure after Auto Set Up on page 6 and/or the channel setting steps on pages 50 – 53, and after the Clock Set procedure on page 55.
After setting the Guide Program Numbers, the station names and channel positions may be incorrect if you stored or skipped channels. In this case, re-perform Guide Program Number setting.

Guide Program Number Set

1 MAKE LIST OF STORED STATION NAMES AND CHANNEL POSITIONS

(Ex.)

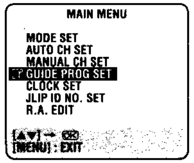
Channel position	Station name
1	ARD
2	ZDF
3	WDR

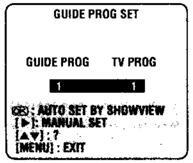
2 ACCESS MAIN MENU SCREEN

Press **MENU** twice.

3 ACCESS GUIDE PROG SET SCREEN

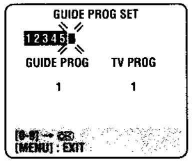
Press **PUSH JOG** △▽ to move the highlight bar (pointer) to "GUIDE PROG SET", then press **OK**.
The Guide Prog. Set screen appears.


MAIN MENU
MODE SET
AUTO CH SET
MANUAL CH SET
GUIDE PROG SET
CLOCK SET
JLIP ID NO. SET
R.A. EDIT
[▲▼] → OK
[MENU] : EXIT


GUIDE PROG SET
GUIDE PROG
TV PROG
1
1
OK : AUTO SET BY SHOWVIEW
[▶]: MANUAL SET
[▲▼] : ?
[MENU] : EXIT

4 ENTER SHOWVIEW NUMBER

Press **OK**, and a cursor appears above "GUIDE PROG". Then, using the **NUMBER** keys, input the SHOWVIEW number (found in most TV listings) of a program scheduled to be broadcast on each station on the list from step **1**, starting at the top. If you enter the wrong number, press **CANCEL** to backspace and input the correct number.

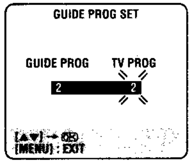

GUIDE PROG SET
12345
GUIDE PROG
TV PROG
1
1
[0-9] → OK
[MENU] : EXIT

When entering a SHOWVIEW number for ZDF

5 CONFIRM CHANNEL POSITION NUMBER

Press **OK** and the display under "TV PROG" begins blinking.

If the blinking number under "TV PROG" agrees with the channel position . . .
. . . press **OK**.
If the numbers do not agree . . .
. . . input the channel position using **PUSH JOG**△▽ or the **NUMBER** keys, then press **OK**.


GUIDE PROG SET
GUIDE PROG
TV PROG
2
2
[▲▼] → OK
[MENU] : EXIT

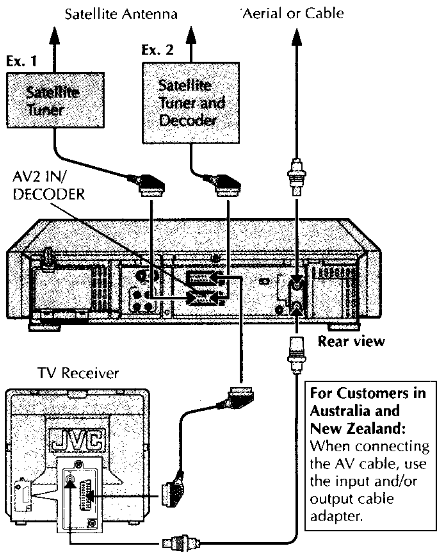
- If you input the SHOWVIEW number of a program that has already aired, "ERROR" appears on screen for a few seconds. Input the correct SHOWVIEW number.
- Repeat steps **4** and **5** as necessary.

6 CLOSE MENU

Press **MENU** and selection is complete.

If you already know the Guide Program number for a station . . .
1– After step **3**, press **PUSH JOG**▷.
  - The GUIDE PROG number begins blinking.
2– Enter the Guide Program number using the **NUMBER** keys or **PUSH JOG**△▽, then press **PUSH JOG**▷ .
  - The TV PROG number begins blinking.
3– Enter the channel position using the **NUMBER** keys or **PUSH JOG**△▽, then press **PUSH JOG**◁ .
  - Repeat **2** and **3** as necessary.
4– Press **MENU**.

When Using A Satellite Tuner


Satellite Antenna
Aerial or Cable
Ex. 1
Ex. 2
Satellite Tuner
Satellite Tuner and Decoder
AV2 IN/ DECODER
Rear view
TV Receiver
JVC

For Customers in Australia and New Zealand:
When connecting the AV cable, use the input and/or output cable adapter.

Preparation
1– Connect the satellite tuner to the AV2 IN/DECODER connector on the rear of your recorder.
2– Set "AV2 SELECT" to "AV2" (☞ pg. 35).

To Record Satellite Broadcasts . . .
1– Select the appropriate channel on the satellite tuner.
2– Set your recorder's input mode to "AUX2". (☞ pg. 35)
3– Start recording (☞ pg. 23, steps **3** – **6**).

To Record Satellite Broadcasts Using SHOWVIEW Timer Recording . . .
1– Set your recorder's input mode to "AUX2". (☞ pg. 35)
2– Perform Guide Program Number setting.
  - In step **5** in the left column, press **NUMBER** key "0" to set "TV PROG" to "AUX2".
3– Perform SHOWVIEW Timer Recording (☞ pg. 28).

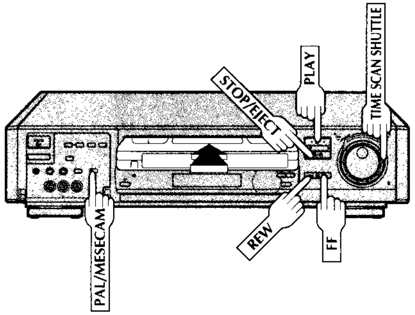
To Record Satellite Broadcasts Using Regular Timer Recording . . .
1– In step **6** on page 31, press **TV PROG +/–** to set the channel position to "AUX2".

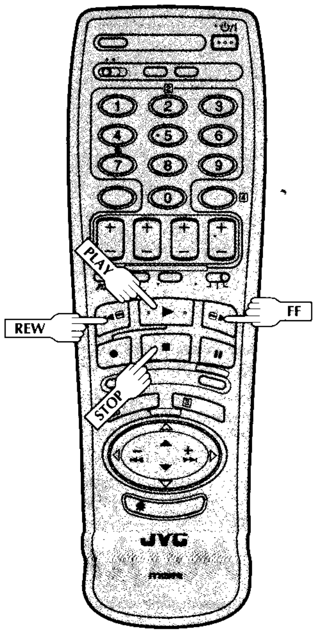
NOTES:

- *When timer-recording a satellite programme, first set the satellite tuner to the appropriate channel before the selected programme begins and then set the satellite tuner's timer. If your satellite tuner does not have a timer, leave it switched on.*
- *If your recorder's front panel VIDEO and/or AUDIO connectors are being used, they take priority and "AUX2" cannot be selected. Make sure no cables are connected to the front panel connectors when performing this procedure.*

Basic Playback

- Turn on the TV and select the VIDEO channel (or AV mode).
- Set the **PAL/MESECAM** switch to the appropriate position. ☞ pg. 16





The easiest, most basic operation possible with your video recorder is tape playback. Already-recorded signals on a video tape are read by your video recorder and displayed on your TV just like a TV programme.

1

LOAD A CASSETTE

Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is point toward the recorder. Don't apply too much pressure when inserting.

- The recorder power comes on automatically and the counter is reset to 0:00:00.
- If the record safety tab has been removed, playback begins automatically.

2

FIND PROGRAMME START POINT

If the tape is advanced past the start point, press **REW** or turn the **TIME SCAN SHUTTLE** ring to the left.
To go forward, press **FF** or turn the **TIME SCAN SHUTTLE** ring to the right.

3

START PLAYBACK

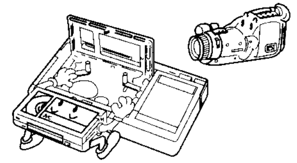
Press **PLAY**.

4

STOP PLAYBACK

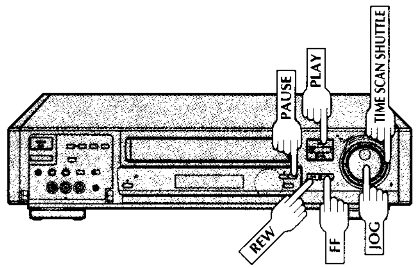
Press **STOP** on the remote or **STOP/EJECT** on the recorder's front panel. Then press **STOP/EJECT** to remove the cassette.

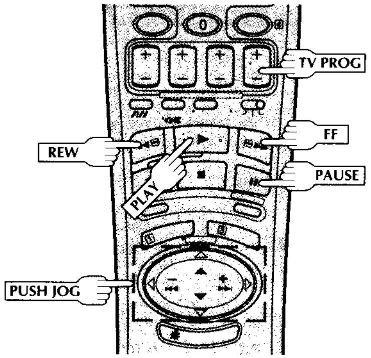
Usable cassettes



- Compact VHS camcorder recordings can be played on this video recorder. Simply place the recorded cassette into a VHS Cassette Adapter and it can be used just like any full-sized VHS cassette.
- This video recorder can record on regular VHS and Super VHS cassettes. While only VHS signals can be recorded on regular VHS cassettes, both VHS and Super VHS signals can be recorded and played back using Super VHS cassettes.

Playback Features





High-Speed (Turbo) Search

1

ACTIVATE HIGH-SPEED SEARCH

During playback or still picture, press **FF** for forward high-speed search, or **REW** for reverse high-speed search.

To resume normal playback, press **PLAY**.

NOTES:

- *For short searches, press and hold **FF** or **REW** for over 2 seconds. When released, normal playback resumes.*
- *Picture may not appear during search with an LP-recorded tape.*
- *In the search, still, or frame by frame playback mode, the picture may be distorted, and there may be a loss of colour.*

Take advantage of special functions possible with the recorder's controls or the remote control.

Still Picture/Frame-By-Frame Playback

1

PAUSE DURING PLAYBACK

Press **PAUSE**. If there is vertical jitter, use the **TV PROG** buttons to correct the picture.

- During still picture, the sound from the previous 3 seconds (approx.) will be played back repeatedly (provided there was at least 6 seconds of normal playback prior to engaging the still picture mode). However, the TIME SCAN indicator will not light.
- "TIME SCAN AUDIO" must be set to "ON", or the sound will not be heard. (☞ pg. 22)

2

ACTIVATE FRAME-BY-FRAME PLAYBACK

Turn the **JOG** dial to the right for forward frame-by-frame playback, or to the left for reverse frame-by-frame playback.

OR

Press **PAUSE**.

OR

Press **PUSH JOG** ◁ or ▷.

To resume normal playback, press **PLAY**.

Slow Motion

1

ACTIVATE SLOW-MOTION PLAYBACK

Turn the **TIME SCAN SHUTTLE** ring to the left or press **PUSH JOG** ◁ during playback to decrease speed in the forward direction. To play in reverse slow-motion (and in reverse play mode), continue to turn the **TIME SCAN SHUTTLE** ring to the left or press **PUSH JOG** ◁ after selecting all the forward direction slow-motion modes.

OR

During still picture, turn the **TIME SCAN SHUTTLE** ring to the right for forward slow motion, or to the left for reverse slow motion.

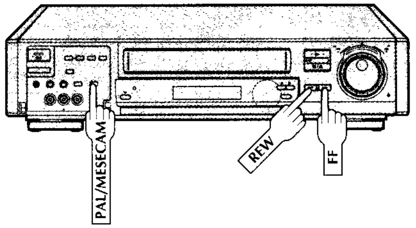
OR

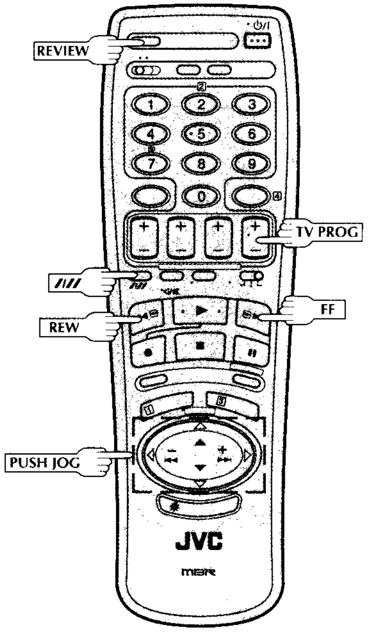
During still picture, press and hold **PAUSE** for 2 seconds, then release. Press and release again to return to still picture.

OR

During still picture, press and hold **PUSH JOG** ◁ or ▷. Release to return to still picture.

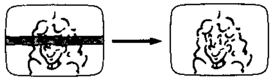
To resume normal playback, press **PLAY**.





Manual Tracking

Your video recorder is equipped with automatic tracking control. During playback, you can override this and adjust the tracking manually by pressing the **TV PROG** buttons.



1 OVERRIDE AUTOMATIC TRACKING

Press **SP/LP (///)** on the remote to engage manual tracking.

2 ADJUST TRACKING MANUALLY

Press **TV PROG** + or – to adjust tracking.

3 RETURN TO AUTOMATIC TRACKING

Press **SP/LP (///)** on the remote to re-engage automatic tracking.

NOTE:

When a new tape is inserted, the recorder enters the automatic tracking mode automatically.

Colour System Selection

You can also record SECAM signals, or play back a MESECAM tape on this recorder.

* MESECAM is the designation for tapes with SECAM signals that have been recorded on a MESECAM-compatible PAL video recorder.

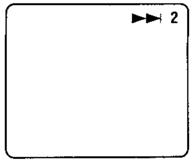
- To record SECAM signals or play back a MESECAM tape, set the **PAL/MESECAM** switch to "MESECAM".
- To record PAL signals or play back a PAL tape, set the **PAL/MESECAM** switch to "PAL".

3R Picture

Your video recorder is equipped with the 3R Picture System. During playback, 3R(= Resolution and Response Recovery technology) maximises sense of resolution and sharpens image edges to make playback picture look better focused.

Index Search

Your recorder automatically marks index codes at the beginning of each recording. This function gives you quick access to any one of 9 index codes in either direction.



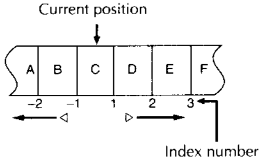
NOTE:

Before starting, make sure the recorder is in the Stop mode.

1 ACTIVATE INDEX SEARCH

Press **PUSH JOG** ◁ or ▷(I◄◄ or ►►I). "I◄◄ 1" or "►►I 1" is displayed on screen and search begins in the corresponding direction.

- To access index codes 2 through 9, press **PUSH JOG** ◁ or ▷ repeatedly until the correct index number is displayed.
  Ex.: To locate the beginning of B from the current position, press **PUSH JOG** ◁ twice.
  To locate the beginning of D from the current position, press **PUSH JOG** ▷ once.

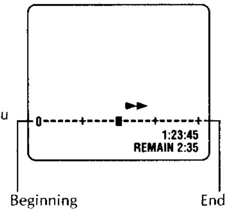


- When the specified index code is located, playback begins automatically.

Tape Position Indicator

The tape position indicator appears on screen when, from the Stop mode, you press **FF**, **REW** or perform an Index Search. The position of "■" in relation to "0" (beginning) or "+" (end) shows you where you are on the tape.

"O.S.D." (☞ pg. 27) must be set to "ON", or the indicator will not appear.



NOTE:

Depending on the type of tape used, there may be times when the indication is not correct.

Instant ReView

Simply by pressing a single button, the recorder power comes on, rewinds, and begins playback of the last timer-recorded programme. If you have several programmes recorded, you can easily access any of them.

NOTE:

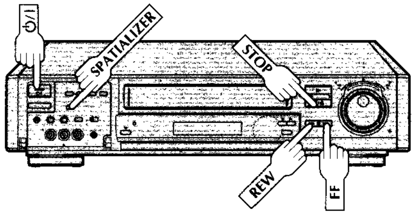
Before starting, make sure that the recorder is off and that the Timer mode is disengaged.

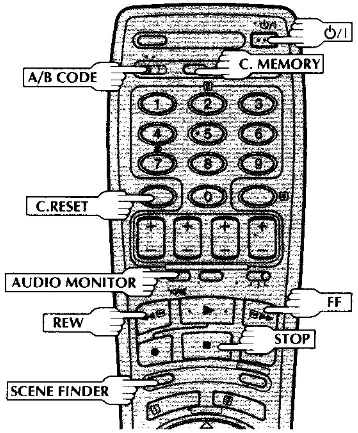
1 ACTIVATE INSTANT REVIEW

Press **REVIEW**. The recorder power comes on and the recorder searches for the index code indicating the start of the last timer-recorded programme. Once it's found, playback begins automatically.
The front display panel tells you how many programmes have been recorded. If you have, for example, 3 programmes, "REVIEW" and "3" appear and blink. To watch the first of the 3 programmes, press **REVIEW** three times. The recorder searches and begins playback automatically. You can access a programme as far as 9 index codes away from the current tape position.

NOTE:

Instant ReView is not possible while the recorder is in the Timer mode.





Spatializer®

This feature expands sound field when you play back any stereo source or view a stereo programme while recording it.
*Spatializer® has no effect on recording quality.

1

ACTIVATE SPATIALIZER®

Press **SPATIALIZER**; the current setting will be displayed on the screen for about 5 seconds. Pressing **SPATIALIZER** while the screen shows the display changes the setting.

- To view a stereo programme such as movies or music, select "SPATIALIZER ▷ ◁" to create more spacious sound.
- To view a monaural programme, select "SPATIALIZER→ST" which simulates a stereo effect.
- Select "SPATIALIZER OFF" to turn off Spatializer® if the sound becomes unnatural with either "SPATIALIZER ▷ ◁" or "SPATIALIZER→ST" selected.
- If your TV is equipped with 3D-PHONIC and if you use both Spatializer® and 3D-PHONIC at the same time, the sound may become unnatural; set either function to "OFF".
- The setting will remain effective even though you turn on/off the recorder.

NOTES:

- *Spatializer® is effective only with a stereo TV.*
- *The setting cannot be changed during search, still, frame-by-frame playback or slow motion mode.*
- *When this recorder is used as the player for editing, the recorded audio will correspond to the Spatializer® setting.*

Soundtrack Selection

Your video recorder is capable of recording three soundtracks (HI-FI L, HI-FI R and NORM) and will play back the one you select.

During Playback
Pressing **AUDIO MONITOR** on the remote control changes the soundtrack being played back as follows:

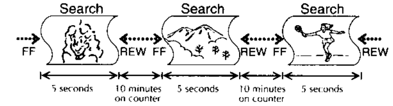
TRACK		USE
Recorder's Front Panel	On-Screen Display	
L + R	HI FI L ▷ ◁ R	For Hi-Fi stereo tapes
L	HI FI L ▷	For main audio of Bilingual tapes
R	◁ R	For sub audio of Bilingual tapes
NORM	NORM	For audio-dubbed tapes
L + R + NORM	HI FI NORM	For audio-dubbed tapes

NOTES:

- *"L + R" should normally be selected. In this mode, Hi-Fi stereo tapes are played back in stereo, and the normal audio track is played back automatically for tapes with only normal audio.*
- *For instructions on recording stereo and bilingual programmes, refer to* page 25.
- *"O.S.D." must be set to "ON" or the on-screen displays will not appear (☞ pg. 27).*

Scene Finder

This function helps you check contents of unlabeled recorded tapes at the touch of a single button.



NOTE:

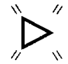
Scene Finder cannot be used when the recorder is in the Record mode.

1

ACTIVATE SCENE FINDER

Press **SCENE FINDER**. The recorder starts forward search for 5 seconds and then fast-forwards 10 minutes on the counter. This cycle is repeated until the end of the tape is reached.

- To start Scene Finder in the reverse direction, press **SCENE FINDER** and then press the **REW** button within 2 seconds. This cycle is repeated until the beginning of the tape.
- During Scene Finder, the following indications appear on the display panel:



2

STOP SCENE FINDER

Press **STOP**.

NOTES:

- *During Scene Finder search, you can also hear the tape sound. During fast forward or rewind, you hear the current TV sound instead.*
- *During Scene Finder, the sound can be heard regardless of "TIME SCAN AUDIO" setting. ☞ pg. 22.*
- *Scene Finder does not function during Index Search.*

Next Function Memory

You can set your recorder's power to go off automatically after the tape is fully rewound. Before starting, make sure the recorder is in the Stop mode.
For Automatic Power Off After Tape Rewind . . .
. . . press **REW**, then press ⏻/I within 2 seconds.

NOTE:

*If you want the power to be turned off automatically when the counter reads "0:00:00" (instead of at the beginning of the tape), press **C.MEMORY** so that the "M" mark appears before pressing **REW**.*

Remote A/B Code Switching

The remote control is capable of controlling two JVC video recorders independently; one set to respond to the remote control's A code control signals and another set to respond to B code control signals. The remote control is preset to send A code signals because your video recorder is initially set to respond to A code signals. You can easily modify your video recorder to respond to B code signals.

1

REMOVE POWER SUPPLY

Unplug the mains power cord from the mains outlet.

2

SET A/B CODE SWITCH

Set to B.

3

RE-SUPPLY POWER

Plug the mains power cord back into the mains outlet.

4

TURN THE RECORDER ON

Press ⏻/I on the remote control. The recorder will now only respond to B code signals.

NOTE:

Some TV sets may malfunction in response to the B mode. If this happens, switch back to the A mode.

Counter Memory

Returns to the counter reading of "0:00:00" to conveniently find a specific place on the tape automatically.

1

SET COUNTER MEMORY

Press **C. RESET** during playback at a point you wish to locate later. The counter reads "0:00:00". Then press **C.MEMORY**, and "M" appears in front of the counter digits.

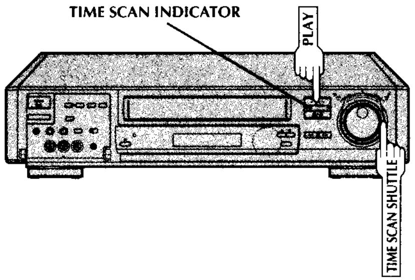
2

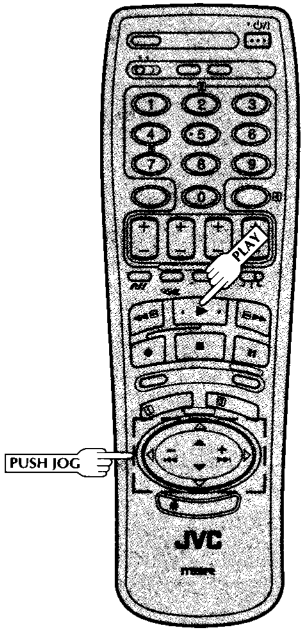
ACTIVATE COUNTER MEMORY

When you wish to return to the designated point, press **STOP** and then **REW** or **FF**.

- The tape rewinds or fast-forwards and stops at about 0:00:00 automatically.
- To cancel Counter Memory, press **C.MEMORY** again.

TimeScan





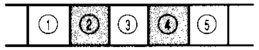
Your recorder is equipped with the TimeScan function. TimeScan allows noise free pictures to be displayed on your TV screen in the forward and reverse search modes. Audio will be played back at normal speed during any of the TimeScan modes (☞ pg. 21). TimeScan allows you to view a program in search mode while listening to the audio.

NOTES:

- *"TIME SCAN AUDIO" must be set to "ON", or the sound will not be heard in TimeScan mode. (☞ pg. 21)*
- *The audio will not synchronize with the video in TimeScan modes.*
- *In Pause mode 3 seconds (approx.) of audio will be played back repeatedly. (☞ pg. 15)*
- *In TimeScan search modes some of the audio information will not be played so that the audio can keep up with the video.*

Audio signal during TimeScan

Playback tape



Sound of ①, ③ and ⑤ is heard.
Sound of ② and ④ is not heard.
Output audio signal is normal (monaural) sound.

Variable-Speed Search/ Reverse Play

1 ACTIVATE VARIABLE-SPEED SEARCH

During playback or still, turn the recorder's **TIME SCAN SHUTTLE** ring. It remains at that position even after you release it. Each time it passes a click position, the playback speed changes.
(Refer to the chart on pg 21 for playback speeds).

OR

During playback, press **PUSH JOG** ◁ or ▷.

- The more times you press, the faster the playback picture moves.
- To decrease speed, press the button for the opposite direction.
  (Refer to the chart on pg 21 for playback speeds).

To resume normal playback, press **PLAY**.

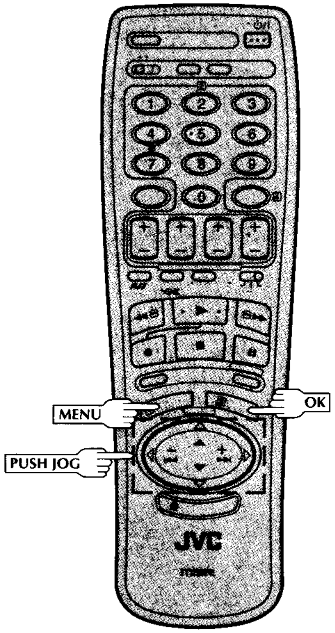
TimeScan

Names of special-effects playback	Reverse								Forward							
	Search				Play	Slow-Motion		*Still	Slow-Motion		Play	Search				
Speed SP	-9x	-7x	-5x	-3x	-1x	-1/6x	-1/18x	0	1/18x	1/6x	1x	2x	3x	5x	7x	9x
Speed LP		-7x		-3x		-1/6x	-1/18x	0	1/18x	1/6x	1x	2x		5x		9x
Audio output	Audio is output.					Audio is not output.		Audio is output.	Audio is not output.		Audio is output.					

* Still mode cannot be engaged using the remote control's **PUSH JOG** button. In the Still mode, the TIME SCAN indicator does not light even though you can hear TimeScan audio.

- The VCR's TimeScan indicator lights during TimeScan.
- The speed is shown during TimeScan in the upper right corner of the TV screen for approx. 5 seconds. (The display may be distorted.)
- To resume normal playback, press **PLAY**.
- When using the recorder's **TIME SCAN SHUTTLE** ring, the playback speed may not change depending on how far it is turned.
- Picture and audio may become distorted when the recording speed changes. When this happens, resume normal playback once, and then try using TimeScan again.
- The picture may be noisy or there may be a loss of colour when you change the playback speed. (More noise will appear with LP recordings.)
- Noise may appear or the upper part of the picture may be distorted during still, frame-by-frame playback, 2x search of LP recordings, or depending on the tape being used.
- Picture may appear distorted in comparison to normal playback.
- In TimeScan mode there will be a time lag between the video and the audio and noise may appear in the audio signal.
- TimeScan sound quality will differ in comparison to normal playback.
- When the playback direction is reversed, it takes approximately 6 seconds until sound is heard.
- Picture will be monochrome with an LP-recorded MESECAM tape during TimeScan.

If you don't want to hear TimeScan audio, set "TIME SCAN AUDIO" to "OFF" (☞ pg. 22).



TimeScan Audio

The audio output can be set ON/OFF during TimeScan. Select ON/OFF as required.

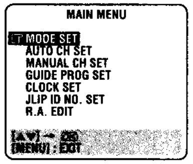
* The default setting is "ON".

1 ACCESS MAIN MENU SCREEN

Press **MENU** twice.

2 ACCESS MODE SET SCREEN

Move the highlight bar (pointer) to "MODE SET" by pressing **PUSH JOG** ∆∇, then press **OK**.



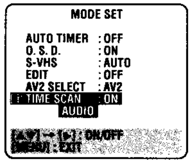
MAIN MENU

MODE SET
AUTO CH SET
MANUAL CH SET
GUIDE PROG SET
CLOCK SET
JLIP ID NO. SET
R.A. EDIT

[▲▼] → [illegible]
[MENU] : EXIT

3 SELECT MODE

Move the highlight (pointer) to "TIME SCAN AUDIO" by pressing **PUSH JOG** ∆∇, then press **PUSH JOG** ▷ to select "ON" or "OFF".



MODE SET

AUTO TIMER : OFF
O. S. D. : ON
S-VHS : AUTO
EDIT : OFF
AV2 SELECT : AV2
TIME SCAN AUDIO : ON

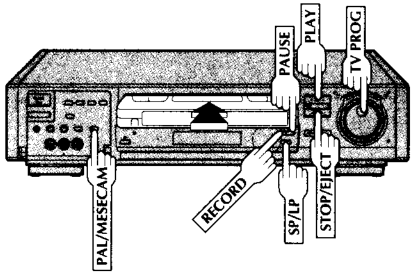
[▲▼] → [▶] : ON/OFF
[MENU] : EXIT

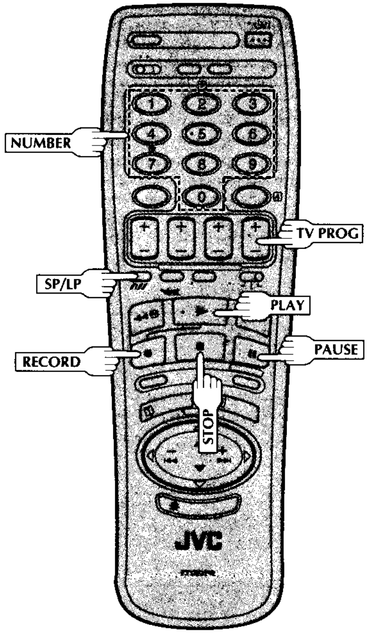
4 RETURN TO NORMAL SCREEN

Press **MENU**.

Basic Recording

- Turn on the TV and select the VIDEO channel (or AV mode).
- Set the **PAL/MESECAM** switch to the appropriate position. ☞ pg. 16





TV signals being received by the recorder's built-in tuner can be recorded onto a video tape. You can "capture" a TV programme using your video recorder.

1 LOAD A CASSETTE

Insert a cassette with the record safety tab intact.

- The counter is reset to 0:00:00 and the recorder power comes on automatically.

2 CHOOSE A PROGRAMME

Press **TV PROG +/–** or the **NUMBER** keys to select the channel you wish to record.

- The **TV PROG** dial can also be used to select a channel.

3 SET TAPE SPEED

Press **SP/LP** (**///**). Check the SP/LP indicator on the recorder display panel to confirm the selected tape speed.

4 START RECORDING

Press and hold **RECORD** and **PLAY** on the remote control, or press **RECORD** on the recorder.

5 PAUSE/RESUME RECORDING

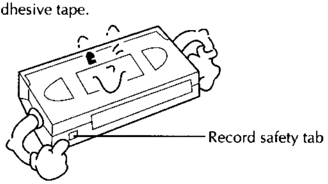
Press **PAUSE**. Press **PLAY** to resume recording.

6 STOP RECORDING

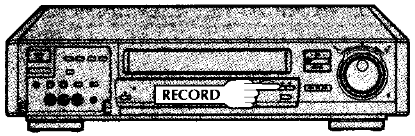
Press **STOP** on the remote control or **STOP/EJECT** on the recorder. Then press **STOP/EJECT** to remove the cassette.

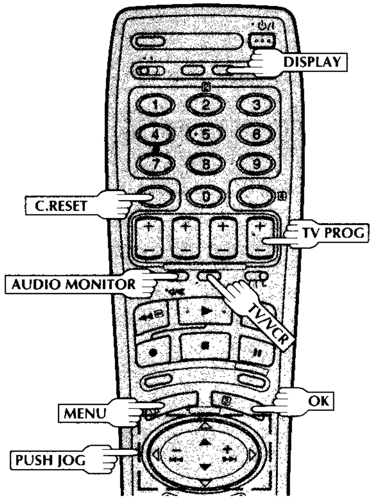
Accidental erasure prevention

- To prevent accidental recording on a recorded cassette, remove its safety tab. To record on it later, cover the hole with adhesive tape.



Recording Features





Tape Remaining Time

1 DISPLAY REMAINING TIME

Press **DISPLAY** until the time remaining on the tape appears.

- By pressing the **DISPLAY** button, you can change the display to show the counter reading, channel position*, clock time or tape remaining time.
  ** channel position is not displayed during playback.*

NOTE:

Depending on the type of tape used, there may be times when the tape remaining time reading may not appear right away, or is not correct. "- - : - -" may sometimes appear, or the display may blink on occasion.

Record One Programme While Watching Another

If your recorder is connected to the TV via AV connection, ... press **TV/VCR**. The recorder's VCR indicator and the TV broadcast being recorded disappear.

1 SELECT CHANNEL TO WATCH

Once recording is in progress, all you need to do is to set the channel controls on the TV for the station you wish to view.

- The programme selected with the TV's channel controls appears on the TV screen while the one selected with the recorder's **TV PROG** buttons is recorded on the tape.
- If a decoder is connected to the recorder (☞ pg. 45), you can select a scrambled channel as well with the TV channel controls.

Elapsed Recording Time Indication

You can check the exact time of a recording.

1 SET COUNTER DISPLAY

Press **DISPLAY** until a counter reading appears on the dispay panel.

2 RESET COUNTER

Press **C. RESET** before starting recording or playback.

- The counter is reset to "0:00:00" and shows the exact elapsed time as the tape runs.

Instant Timer Recording (ITR)

This easy method lets you record for from 30 minutes to 6 hours (selectable in 30-min. increments), and shuts the recorder off after recording is finished.

1 START RECORDING

Press **RECORD** on the recorder.

2 ENGAGE ITR MODE

Press **RECORD** again. "⏲" blinks and 0:30 appears on the front display panel.

3 SET RECORDING DURATION

If you want to record for more than 30 minutes, press **RECORD** to extend the time. Each press extends recording time by 30 minutes.

NOTE:

*You can only perform ITR using the **RECORD** button on the recorder's front panel.*

S-VHS (Super VHS) and VHS

Your recorder can record in either S-VHS or VHS.

To record in S-VHS;
- insert a cassette marked "S-VHS", the "S" (S-VHS) indicator will light on the display panel.
- then, perform the steps **1 – 4** below to set the "S-VHS" to "AUTO".

The S-VHS recording mode will be selected.

To record in VHS;
- insert a cassette marked "VHS".

The VHS recording mode will be automatically selected regardless of the S-VHS mode setting.

To record in VHS on an S-VHS cassette;
- insert the cassette marked "S-VHS", the "S" (S-VHS) indicator will light on the display panel.
- then, perform the steps **1 – 4** below to set the "S-VHS" to "OFF"; the "S" (S-VHS) indicator will go out.

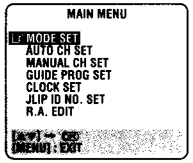
The VHS recording mode will be selected.

1 ACCESS MAIN MENU SCREEN

Press **MENU** twice.

2 ACCESS MODE SET SCREEN

Move the highlight bar (pointer) to "MODE SET" by pressing **PUSH JOG** △▽, then press **OK**.



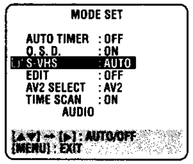
MAIN MENU

☞ MODE SET
AUTO CH SET
MANUAL CH SET
GUIDE PROG SET
CLOCK SET
JLIP ID NO. SET
R.A. EDIT

[▲▼] → OK
[MENU] : EXIT

3 SELECT MODE

Move the highlight (pointer) to "S-VHS" by pressing **PUSH JOG** △▽, then press **PUSH JOG** ▷ to select "AUTO" or "OFF".



MODE SET

AUTO TIMER : OFF
O. S. D. : ON
☞ S-VHS : AUTO
EDIT : OFF
AV2 SELECT : AV2
TIME SCAN : ON
AUDIO

[▲▼] → [▶] : AUTO/OFF
[MENU] : EXIT

4 RETURN TO NORMAL SCREEN

Press **MENU**.

Receiving Stereo And Bilingual Programmes

Your recorder is equipped with a Sound-Multiplex decoder (A2) and, if you own the HR-S9400EH, a Digital stereo sound decoder (NICAM) as well, making reception of stereo and bilingual broadcasts possible.

When the channel is changed, the type of broadcast being received will be displayed on the TV screen for a few seconds.

Type of Broadcast Being Received	On-screen Display
A2 Stereo	ST
A2 Bilingual	BIL
Regular Monaural	(none)
*NICAM Stereo	ST NICAM
*NICAM Bilingual	BIL NICAM
*NICAM Monaural	NICAM

*Available with HR-S9400EH only.

- To listen to a stereo programme, press **AUDIO MONITOR** until "L" and "R" appear on the front display panel.
- To listen to a bilingual programme, press **AUDIO MONITOR** until either "L" or "R" appears on the front display panel (as required).
- To listen to the Standard (regular monaural) audio while receiving a NICAM broadcast, press **AUDIO MONITOR** until "NORM" appears on the front display panel. (HR-S9400EH only)

NOTE:

"O.S.D." must be set to "ON" or the on-screen displays will not appear (☞ pg. 27).

To Record Stereo And Bilingual Programmes (A2)

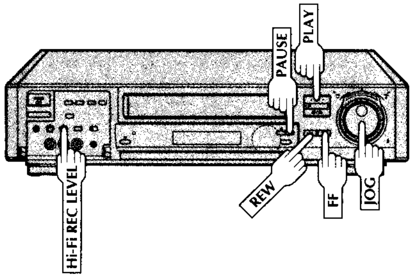
- Stereo programmes are automatically recorded in stereo on the Hi-Fi audio track (with the normal audio track recording mixed L and R channel sound).
- Bilingual programmes are automatically recorded in bilingual on the Hi-Fi audio track. The main soundtrack will be recorded on the normal audio track.

NOTES:

- *If the quality of stereo sound being received is poor, the broadcast will be received in monaural with better quality.*
- *Before playing back a programme recorded in stereo, or a bilingual programme, refer to "Soundtrack Selection" (☞ pg. 18).*

To Record NICAM Stereo And Bilingual Programmes (HR-S9400EH only)

- The NICAM audio programme will be recorded on the Hi-Fi audio track, and the Standard audio programme on the normal audio track.



Hi-Fi Audio Recording LEVEL Control

In most cases, setting the Hi-Fi audio recording level control to the center position will provide satisfactory results. If necessary, you can adjust the Hi-Fi audio recording level more precisely by reffering to the audio level indicator on the front panel.

1 ADJUST AUDIO RECORDING LEVEL

Turn **Hi-Fi REC LEVEL** in either direction.

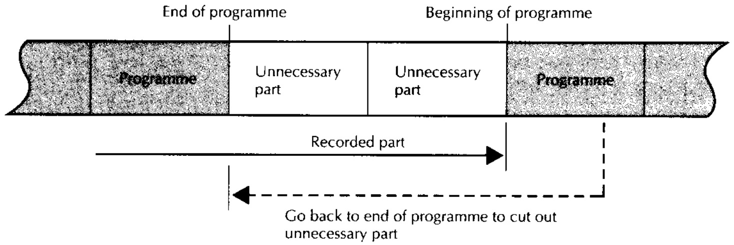
- When the level indicator lights up to or near 0dB with the loudest signal being applied, the recording level is optimum.

NOTES:

- *Make sure that the "HI-FI L+R" position is selected with the **AUDIO MONITOR** button. ☞ p. 18*
- *Noise will increase if the recording level is too low, while distortion will increase if the level is too high.*

Retake

You can cut out unnecessary parts of a TV programme while you're recording it.



1 ENGAGE RECORD-PAUSE MODE

Press **PAUSE** during recording.

2 LOCATE START POINT

Turn the **JOG** dial (or hold down **REW** or **FF**) and release it when you reach the point where you want to resume recording.

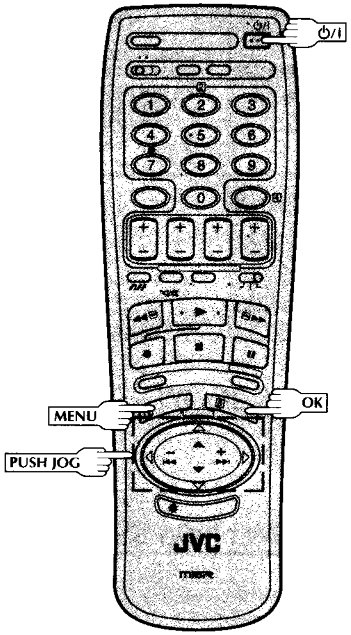
* Your recorder returns to the Record-Pause mode.

3 RESUME RECORDING

Press **PLAY** when you wish to resume recording.

On-Screen Displays

Turn on the TV and select the VIDEO channel (or AV mode).



You can choose whether or not to have various operational indicators appear on screen, by setting this function ON or OFF. Messages appear in the selected language (☞ pg. 8 or 9).

1 TURN ON THE RECORDER

Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

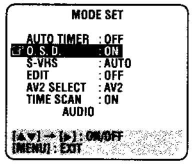
Press **MENU** twice.

3 ACCESS MODE SET SCREEN

Move the highlight bar (pointer) to "MODE SET" by pressing **PUSH JOG** △▽, then press **OK**.

4 ENABLE/DISABLE ON-SCREEN DISPLAY

The default setting is "ON", so if you want on-screen displays, leave the setting as it is and go to step **5**. If you don't want the displays to appear, press **PUSH JOG** △▽ to move the highlight bar (pointer) to "O.S.D." and press **PUSH JOG** ▷ to set "O.S.D." to "OFF".



MODE SET

AUTO TIMER : OFF
O. S. D. : ON
S-VHS : AUTO
EDIT : OFF
AV2 SELECT : AV2
TIME SCAN : ON
AUDIO

[▲▼] → [▶] : ON/OFF
[MENU] : EXIT

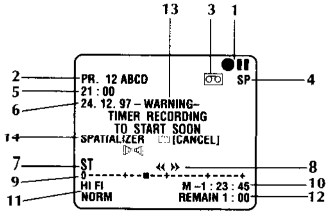
5 RETURN TO NORMAL

Press **MENU**.

NOTES:

- *When you use this recorder as the player for editing, be sure to set "O.S.D." to "OFF." before starting.*
- *During playback, the operation mode indicators may be disturbed depending on the type of tape being used.*

The superimposed indication on the TV screen tells you what the recorder is doing.



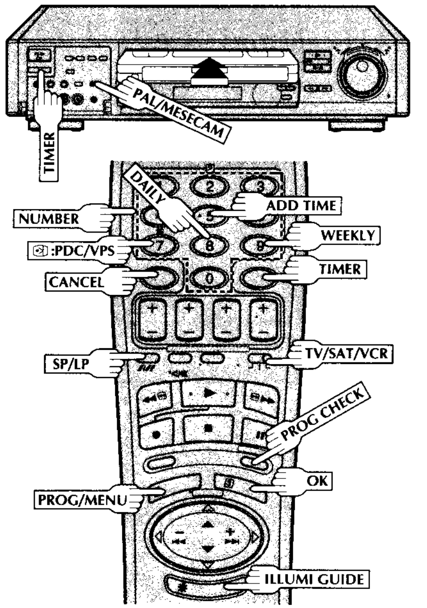
PR. 12 ABCD SP
21 : 00
24. 12. 97 – WARNING–
TIMER RECORDING
TO START SOON
SPATIALIZER [CANCEL]
ST
HI FI M –1 : 23 : 45
NORM REMAIN 1 : 00

1– Operation mode indicators
2– Channel position number and station name/Aux. indicator (AUX1, AUX2, (S) or F-AUX)
3– Cassette loaded mark
4– Tape speed SP/LP
5– Clock display
6– Current day/month/year
7– Type of Broadcast (☞ pg. 25)
8– Tape direction
9– Tape position indicator (☞ pg. 17)
10– Counter display (including Counter Memory indicator)
11– Audio mode display (☞ pg. 18)
12– Tape remaining time indicator (☞ pg. 24)
13– Timer warning display (☞ pg. 33)
14– Spatializer® indicator (☞ pg. 18)

SHOWVIEW Timer Recording

Before performing SHOWVIEW timer recording:
- Be sure to read "SHOWVIEW Setup" (☞ pg. 12).
- Insert a cassette with the safety tab in place. The recorder will come on automatically.
- Turn on the TV and select the VIDEO channel (or AV mode).
- Set the **PAL/MESECAM** switch to the appropriate position. ☞ pg. 16

* **For Customers in Australia and New Zealand:**
With this recorder, the G-Code system is identified as "SHOWVIEW".



When Using The Illumi-Guide Feature
- Buttons light or blink on the remote control for approximately 10 seconds. If the button or buttons extinguish during timer programming, press **ILLUMI GUIDE** and the button or buttons previously lit or blinking come back on. If the button or buttons do not re-light or start blinking again, press **MENU** and re-perform the timer programming procedure from the beginning.
- If for some reason the remote control's signal is not received by the video recorder, press **MENU** and re-perform the timer programming procedure from the beginning.

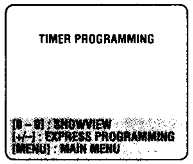
During SHOWVIEW and regular timer programming, the Illumi-Guide feature tells you which button on the remote control must be pressed next by lighting it up. To use this feature, with the **TV/SAT/VCR** switch set to "VCR", press **ILLUMI GUIDE** before performing step **1**. (**PROG**, **REW**, **PLAY**, **FF** light up at this time.)

If you aren't going to use the Illumi-Guide feature, go directly to step **1**.

1

ACCESS TIMER PROGRAMMING SCREEN

Press **PROG**.



TIMER PROGRAMMING

[0 – 9] : SHOWVIEW
[+/–] : EXPRESS PROGRAMMING
[MENU] : MAIN MENU

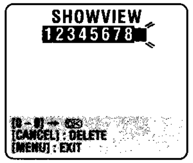
The front display panel looks like this:

- If you are using the Illumi-Guide feature, the following buttons will light up: **NUMBER** keys (0–9), **START** +/–, **STOP** +/–, **DATE** +/–, **TV PROG** +/–, **MENU** and **CANCEL**.

2

ENTER SHOWVIEW NUMBER

Press the **NUMBER** keys to enter the SHOWVIEW number of a programme you wish to record.



SHOWVIEW
12345678

[0 – 9] → ⊡
[CANCEL] : DELETE
[MENU] : EXIT

- If you make a mistake, press **CANCEL** to backspace and then input the correct number.

The SHOWVIEW number you enter appears on the front display panel:

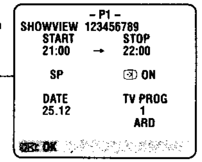
The display panel can only show 4 digits at a time.

- If you are using the Illumi-Guide feature, **OK** blinks when the following buttons are lit: **NUMBER** keys (0–9), **CANCEL** and **MENU**.

3

ACCESS SHOWVIEW PROGRAM SCREEN

Press **OK**, and the SHOWVIEW Program screen appears (if you're just starting out, "P1" appears).



– P1 –
SHOWVIEW 123456789
START 21:00 → STOP 22:00
SP ⊡ ON
DATE 25.12 TV PROG 1 ARD
⊡ : OK

The display panel shows the programme start time. Pressing **PROG CHECK** changes the display to the programme stop time, then the date and channel position.

IMPORTANT
Be sure to confirm the setting of PDC/VPS recording.
- If " ⊡ ON" is displayed on the screen or " ⊡ " is lit on the display panel, PDC/VPS is set to ON.
- If " ⊡ OFF" is displayed on the screen or " ⊡ " is not lit on the display panel, PDC/VPS is set to OFF.

To change the setting, press ⊡ : **PDC/VPS** (**NUMBER** key "7").
☞ "PDC/VPS Recording" on page 33.

- Make sure the channel position number you wish to record is displayed; if not, see "SHOWVIEW Setup" on page 12 and set the Guide Program number for that SHOWVIEW number correctly.
- If the number you entered is invalid, "ERROR" appears on the screen and "Err" appears on the display panel. Press **CANCEL** to backspace and input a valid SHOWVIEW number.
- If "ERROR=GUIDE PROG" appears on the screen, see "ATTENTION – Regarding Guide Program Number Set" in the right column.
- If you are using the Illumi-Guide feature, **OK** blinks.

4

SET TAPE SPEED

Press **SP/LP** (**/////**) to set the tape speed.

5

RETURN TO NORMAL SCREEN

Press **OK**.

- Repeat steps **1** – **5** for each additional programme.

6

ENGAGE RECORDER'S TIMER MODE

Press **TIMER**. The recorder turns off automatically.

NOTE:

To Delay The Stop Time . . .
. . . press **ADD TIME** (**NUMBER** Key "5") after pressing **OK** in step **3**. Each time you press, the Stop time is delayed by 5 minutes (meaning that 5 minutes of recording time is added). You can easily compensate for anticipated programme schedule delays this way.

To Timer-Record Weekly Or Daily Serials . . .
. . . after pressing **OK** in step **3**, press **WEEKLY** (**NUMBER** key "9") for weekly serials or **DAILY** (**NUMBER** key "8") for daily serials (Monday–Friday). Either "WEEKLY" or "DAILY" appears on the screen. Pressing the button again makes the corresponding indication disappear.

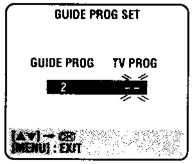
You can programme this recorder to timer-record as many as 8 programmes. If you try to programme the recorder to record a ninth, "PROGRAM FULL" appears on screen and "FULL" appears on the front display panel. To record the extra programme, you must first cancel any unnecessary programmes (☞ pg. 32).

Satellite Tuner Users
To timer-record a satellite broadcast using SHOWVIEW:
- Before you start step **1**, be sure to set the recorder's input mode to "AUX2" (☞ pg. 35). Do NOT change the input mode until the selected programme has been timer-recorded.
- Before the selected programme begins, select the appropriate channel on the satellite tuner, and then set the tuner's timer. If your satellite tuner does not have a timer, leave the unit's power on.

ATTENTION

Regarding Guide Program Number Set

"ERROR=GUIDE PROG" appears after performing step **3** on the previous page if the Guide Program number for the SHOWVIEW number you entered has not been set.
- If the recorder is in the stop or rewind or fast-forward mode, the following screen will appear with "– –" under "TV PROG" blinking.
  - Press the **NUMBER** keys or **PUSH JOG** △▽ to input the channel position number you recorder receives that station on, then press **OK**.



GUIDE PROG SET

GUIDE PROG 2 TV PROG – –

[▲▼] → ⊡
[MENU] : EXIT

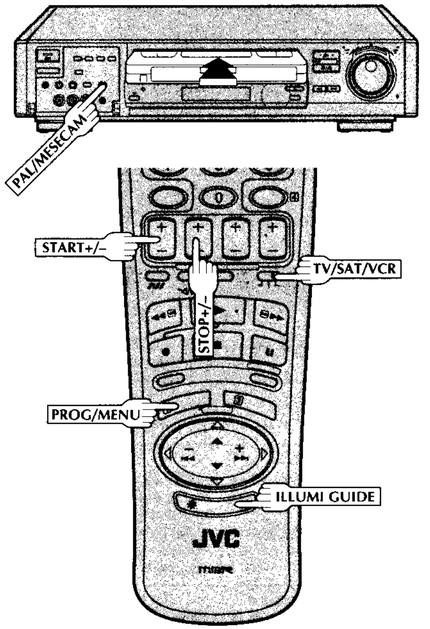
(Ex.) To timer-record a ZDF programme with SHOWVIEW
* If your recorder receives ZDF on the channel position 2, press **OK** after entering "2".

  - Press **MENU**, then try again from step **1**.
- If the recorder is in a mode other than the above mentioned modes, press **MENU** first and input the correct Guide Program number for that SHOWVIEW number (☞ pg. 12, "SHOWVIEW Setup"), then try again from step **1**.

Regular Timer Programming

Remember, the clock must be set before you can programme the timer (☞ pg. 55).

Before performing the following steps:
- Insert a cassette with the safety tab in place. The recorder will come on automatically.
- Turn on the TV and select the VIDEO channel (or AV mode).
- Set the **PAL/MESECAM** switch to the appropriate position. ☞ pg. 16



When Using The Illumi-Guide Feature
- Buttons light or blink on the remote control for approximately 10 seconds. If the button or buttons extinguish during timer programming, press **ILLUMI GUIDE** and the button or buttons previously lit or blinking come back on. If the button or buttons do not re-light or start blinking again, press **MENU** and re-perform the timer programming procedure from the beginning.
- If for some reason the remote control's signal is not received *by the video recorder, press* **MENU** *and re-perform the timer* programming procedure from the beginning.

If you don't know the ShowView number for the programme you wish to record, use the following procedure to set your recorder to timer-record the programme. Or you can use the Illumi-Guide feature, where the remote control tells you which button to press next by lighting it up. To use the Illumi-Guide feature, with the **TV/SAT/VCR** switch set to "VCR", press **ILLUMI GUIDE** before performing step **1**. (**PROG**, **REW**, **PLAY**, **FF** light up at this time.)
If you aren't going to use the Illumi-Guide feature, go directly to step **1**.

1

ACCESS TIMER PROGRAMMING SCREEN

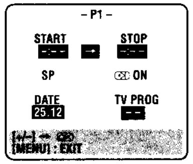
Press **PROG**.

- If you are using the Illumi-Guide feature, the following buttons will light up: **NUMBER** keys (0–9), **START +/–**, **STOP +/–**, **DATE +/–**, **TV PROG +/–**, **MENU** and **CANCEL**.

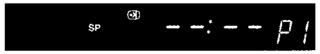
2

ACCESS PROGRAMME SCREEN

Press **START +/–**. (If you're just starting out, "P1" appears.)



The front display panel looks like this:



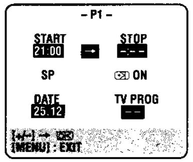
- If you are using the Illumi-Guide feature, the following buttons will light up: **START +/–**, **STOP +/–**, **DATE +/–**, **TV PROG +/–** and **MENU**.

3

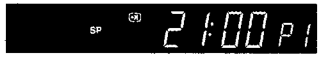
ENTER PROGRAMME START TIME

Press **START +/–** to enter the time you want recording to start.

- Press and hold **START +/–** to move in 30-minute increments, or press and release repeatedly to move 1 minute at a time.



The front display panel looks like this:



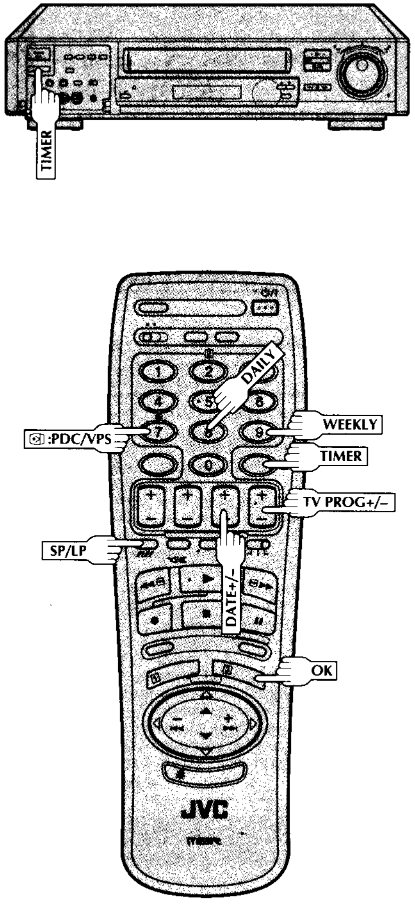
- If you are using the Illumi-Guide feature, the following buttons remain lit: **START +/–**, **STOP +/–**, **DATE +/–**, **TV PROG +/–** and **MENU**.

4

ENTER PROGRAMME STOP TIME

Press **STOP +/–** to enter the time you want recording to stop.

- If you are using the Illumi-Guide feature, the following buttons remain lit: **START +/–**, **STOP +/–**, **DATE +/–**, **TV PROG +/–** and **MENU**.



Satellite Tuner Users
To timer-record a satellite broadcast using Regular Timer Programming:
- Before you start step **1**, be sure to set the recorder's input mode to "AUX2" (☞ pg. 35). Do NOT change the input mode until the selected programme has been timer-recorded. In step **6**, you have to select "AUX2" as well.
- Before the selected programme begins, select the appropriate channel on the satellite tuner, and then set the tuner's timer. If your satellite tuner does not have a timer, leave the unit's power on.

5

ENTER PROGRAMME DATE

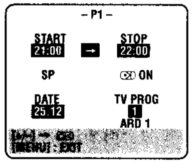
Press **DATE +/–**. (The current date appears on screen. The date you enter appears in its place.)

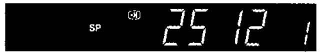
- If you are using the Illumi-Guide feature, the following buttons remain lit: **START +/–**, **STOP +/–**, **DATE +/–**, **TV PROG +/–** and **MENU**.

6

ENTER CHANNEL POSITION

Press **TV PROG +/–**.





IMPORTANT
Be sure to confirm the setting of PDC/VPS recording.
- If " ⊡ ON" is displayed on the screen or " ⊡ " is lit on the display panel, PDC/VPS is set to ON.
- If " ⊡ OFF" is displayed on the screen or " ⊡ " is not lit on the display panel, PDC/VPS is set to OFF.

To change the setting, press ⊡ : **PDC/VPS** (**NUMBER** key "7").
☞ "PDC/VPS Recording" on page 33.

- If you are using the Illumi-Guide feature, **OK** blinks when the following buttons are lit: **START +/–**, **STOP +/–**, **DATE +/–**, **TV PROG +/–** and **MENU**.

7

SET TAPE SPEED

Press **SP/LP (▮▮▮)** to set the tape speed.

8

RETURN TO NORMAL SCREEN

After confirming all information is correct, press **OK** and the normal screen appears.

- Repeat steps **1–8** for each additional programme.

9

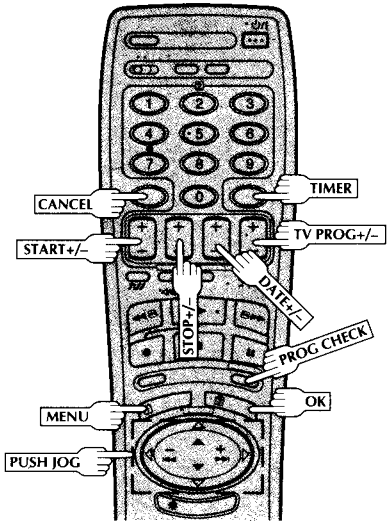
ENGAGE RECORDER'S TIMER MODE

Press **TIMER**. The recorder turns off automatically.

To Timer-Record Weekly Or Daily Serials . . .
. . . anytime during steps **2** through **8**, press **WEEKLY** (**NUMBER** key "9") for weekly serials or **DAILY** (**NUMBER** key "8") for daily serials (Monday–Friday). Either "WEEKLY" or "DAILY" appears on the screen. Pressing the button again makes the corresponding indication disappear.

NOTE:

You can programme this recorder to timer-record as many as 8 programmes. If you try to programme the recorder to record a ninth, "PROGRAM FULL" appears on screen and "FULL" appears on the front display panel. To record the extra programme, you must first cancel any unnecessary programmes (☞ pg. 32).



Check And Cancel Programmes

1 ACCESS PROGRAMME DISPLAY AND/OR SCREEN

Press **PROG CHECK.**

- The display panel shows the programme start time. Pressing **OK** changes the display to the programme stop time, then the date and channel position.
- If the recorder is turned on and the TV is set to its VIDEO channel or AV mode, you can check program information on screen as well.
- Each time you press **PROG CHECK**, the next programme's information appears.

If All Information Is Correct . . .

. . . programming is completed.

If You Wish To Revise Data . . .

. . . with the recorder's power turned on, go to step **2**.

If You Wish To Cancel A Program . . .

. . . with the recorder's power turned on, press **CANCEL**. All information you input is deleted.

2 REVISE PROGRAMME INFORMATION

Input the appropriate data using the **START +/–**, **STOP +/–**, **DATE +/–** and **TV PROG +/–** buttons on the remote control.

Auto Timer

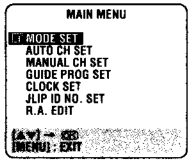
When the Auto Timer is set to ON the timer is automatically engaged when the recorder power is turned off and automatically disengaged when the recorder is powered back on.

1 ACCESS MAIN MENU SCREEN

Press **MENU** twice.

2 ACCESS MODE SET SCREEN

Press **PUSH JOG** △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK**.



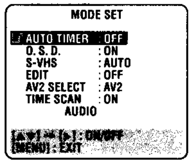
MAIN MENU

MODE SET
AUTO CH SET
MANUAL CH SET
GUIDE PROG SET
CLOCK SET
JLIP ID NO. SET
R.A. EDIT

[▲▼] → OK
[MENU] : EXIT

3 SELECT MODE

Press **PUSH JOG** ▷to select either "ON" or "OFF".



MODE SET

AUTO TIMER : OFF
O. S. D. : ON
S-VHS : AUTO
EDIT : OFF
AV2 SELECT : AV2
TIME SCAN : ON
AUDIO

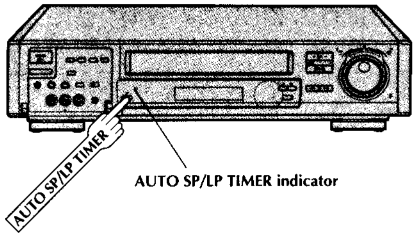
[▲▼] → [▶] : ON/OFF
[MENU] : EXIT

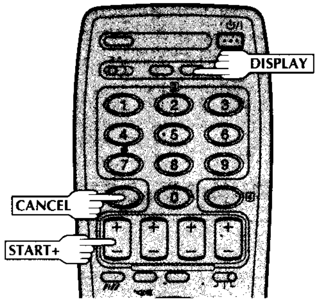
4 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTE:

For safety, when Auto timer is set to "OFF", all other recorder functions are disabled while the Timer mode is engaged. To disengage the timer, press ***TIMER****.*





PDC/VPS Recording

Now available from some TV stations, PDC (Programme Delivery Control) and VPS (Video Programme System) are service designed to assure safe, accurate timer recording. With this system, special code signals are transmitted together with the audio/video signals. These code signals control your video recorder and have precedence over advertised times you preset in the timer. This means that your recorder will start and stop recording when the preset TV programmes actually start and end — even if the broadcast time of a preset TV programme is changed.

NOTES:

- *When you manually enter programmes (regular timer programming), set the start time (PDC or VPS time) exactly as advertised in the TV listing. A different time than advertised will result in no recording.*
- *PDC/VPS recording is not possible in areas where no TV station transmits PDC or VPS signals.*
- *PDC/VPS recording is also possible when a satellite tuner or a cable system is connected to the AV2 IN/DECODER connector on your recorder.*
- *PDC/VPS recording is also possible via the AV1 IN/OUT connector and the front panel connectors.*

How to check if the station being received transmits a PDC/VPS signal

1. Press **DISPLAY** until the channel position appears on the display panel.
2. Hold down **START +** for about 5 seconds.
   - " ⊡ " appears blinking on the display panel.

   If a PDC/VPS signal is detected from the station, " ⊡ " will stop blinking.

   If no PDC/VPS signal is detected from the station, " ⊡ " will blink at a slower rate.
3. Press **DISPLAY** or **START +** again to return to normal display.

Auto SP/LP Timer

If, when recording in SP mode, there is not enough tape to record the entire programme, the recorder automatically switches to LP mode to allow complete recording.

1 ENGAGE AUTO SP/LP TIMER

Press **AUTO SP/LP TIMER** on the recorder front panel. The AUTO SP/LP TIMER indicator lights up.

For Example . . .

Recording a programme of 210 minutes in length onto a 180-minute tape

Approximately 150 minutes	Approximately 60 minutes
SP mode	LP mode

Total 210 minutes

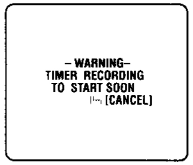
Make sure you press **AUTO SP/LP TIMER** before performing timer programming.

NOTES:

- *The Auto SP/LP Timer feature is not available during ITR (Instant Timer Recording), and the feature will not work properly with any tapes longer than E-180 as well as some tapes of shorter lenghs.*
- *Even if, in step* ***1****, you press* ***AUTO SP/LP TIMER*** *and the indicator lights up, that doesn't mean that the recorder will automatically change from SP to LP mode during the course of the recording. Watch the tape later to confirm.*
- *If you have programmed the recorder to timer-record 2 or more programs, the second programme and those thereafter may not fit on the tape if you engage the Auto SP/LP Timer mode. In this case, make sure the mode is not engaged, then set the tape speed manually during timer programming.*
- *There may be some noise at the point on the tape where the recorder switches from SP to LP mode.*
- *If you perform timer recording with both PDC/VPS and the Auto SP/LP Timer activated, and the programme goes beyond its originally scheduled length, there may be times when the programme cannot be recorded in its entirety.*

Timer Warning

If you have programmed your recorder to timer-record a programme or a series of programmes, a warning appears on screen to tell you that the recording is to start in 5 minutes.



– WARNING–
TIMER RECORDING
TO START SOON
⏎ [CANCEL]

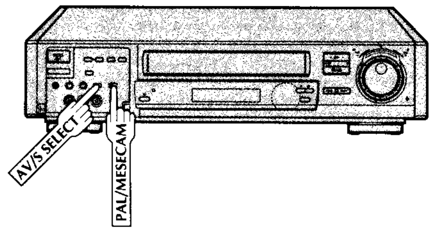
NOTES:

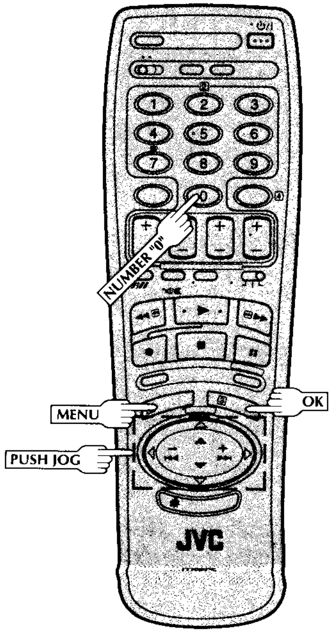
- *The warning only appears if you're not in the Timer mode at that time.*
- *If this recorder is being used as the player for tape dubbing, the warning screen is recorded on the tape in the other video recorder.*

The warning blinks for the entire 5 minutes leading up to the start of timer recording. To clear the display, press **CANCEL**.

Preparation For Editing

- Turn on the TV and select the VIDEO channel (or AV mode).
- Set the **PAL/MESECAM** switch to the appropriate position. ☞ pg. 16





Editing Mode Setting

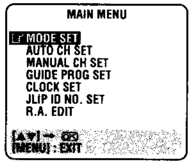
You can minimize picture degradation while editing.

1 ACCESS MAIN MENU SCREEN

Press **MENU** twice.

2 ACCESS MODE SET SCREEN

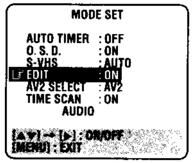
Move the highlight bar (pointer) to "MODE SET" by pressing **PUSH JOG** △▽, then press **OK**.



```
MAIN MENU

☞ MODE SET
  AUTO CH SET
  MANUAL CH SET
  GUIDE PROG SET
  CLOCK SET
  JLIP ID NO. SET
  R.A. EDIT

[▲▼] → OK
[MENU] : EXIT
```

3 SELECT MODE

Move the highlight (pointer) to "EDIT" by pressing **PUSH JOG** △▽, then press **PUSH JOG** ▷ to select "ON".



```
MODE SET

  AUTO TIMER  : OFF
  O. S. D.    : ON
  S-VHS       : AUTO
☞ EDIT        : ON
  AV2 SELECT  : AV2
  TIME SCAN   : ON
     AUDIO

[▲▼] → [▶] : ON/OFF
[MENU] : EXIT
```

4 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTE:

After you finish editing, be sure to set "EDIT" back to "OFF".

Advantages Of S-VHS Video Recorders

You can edit from VHS to S-VHS, S-VHS to VHS, or, from S-VHS to S-VHS.

- From VHS to S-VHS (VIDEO-VIDEO connection): Record VHS playback signals in the S-VHS mode. Although the picture quality is inherently limited by that of the original, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to VHS (VIDEO-VIDEO connection): Because the picture quality of the source material is very high, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to S-VHS (S-VIDEO connection): All signals will be transferred without degradation.

To Select The External Input Mode

To record external audio and video signals;
1. Press the remote control's **NUMBER** key "0".
2. Press **AV/S SELECT** on the front of the recorder to select the appropriate external input mode.
   - Pressing **AV/S SELECT** rotates the input mode as follows:

When using rear panel input connectors:

AV/S SELECT

Connector	Mode (on display panel)	Mode (on screen)
AV1 IN/OUT	AU-1	AUX 1
AV2 IN/DECORDER	AU-2	AUX 2
S IN, AUDIO IN L and R	[S]	(S)

When using front panel input connectors:

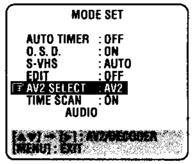
Connector	Mode (on display panel)	Mode (on screen)
VIDEO, AUDIO L and R	F-AU	F-AUX

NOTES:

- To record input signals from the AV2 IN/DECODER connector, set "AV2 SELECT to "AV2" (see below).
- Connections made to the front panel Video and Audio inputs automatically override the rear panel AUDIO/VIDEO input connection. If you wish to edit with another machine connected to the rear input connector, make sure that there is nothing connected to the front connectors.
- Use the L connector for monaural connection.

AV2 SELECT Setting

1. Press **MENU** twice to access the Main Menu screen.
2. Press **PUSH JOG** △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK**.
3. Press **PUSH JOG** △▽ to move the highlight bar (pointer) to "AV2 SELECT".
4. Press **PUSH JOG** ▷ to move the highlight bar (pointer) to your choice:
   a–AV2 : To use this recorder as the recording deck with the player connected to the AV2 IN/DECODER connector.
   b–DECODER : To use a decoder connected to the AV2 IN/DECODER connector.
5. Press **MENU** to return to normal screen.

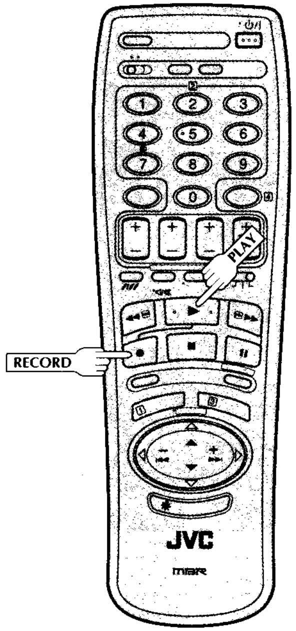


```
MODE SET

  AUTO TIMER  : OFF
  O. S. D.    : ON
  S-VHS       : AUTO
  EDIT        : OFF
☞ AV2 SELECT  : AV2
  TIME SCAN   : ON
     AUDIO

[▲▼] → [▶] : AV2/DECODER
[MENU] : EXIT
```

- If you have a decoder, be sure to set "AV2 SELECT" back to "DECODER" after editing.
- If you're not using a decoder, leave "AV2 SELECT" set to "AV2".
- The default setting is "AV2"; if the recorder's memory backup has expired due to a power cut or because the AC was removed from the recorder, "AV2" will be automatically selected when the power is restored to the recorder. If you are using a decoder, be sure to set "AV2 SELECT" back to "DECODER".

Edit To Or From Another Video Recorder

Set the **PAL/MESECAM** switch to the appropriate position. ☞ pg. 16


RECORD
PLAY
JVC

You can use your video recorder as the source player or the recording deck.

1

MAKE CONNECTIONS

Connect the player's 21-pin SCART (AV) connector to the recorder's 21-pin SCART (AV) connector as illustrated on page 37.

When Using Your Video Recorder As The Source Player . . .
. . . connect its AV1 IN/OUT connector to the recording deck.

When Using Your Video Recorder As The Recording Deck . . .
. . . connect its AV2 IN/DECODER or AV1 IN/OUT connector to the source player.

- If you are using another recorder with S-Video and Audio input/output connectors, you can connect them to this recorder's S-IN/S-OUT and AUDIO IN/OUT connectors.

2

SET RECORDING DECK'S INPUT MODE

Set to AUX. When using this recorder as the recording deck, select the appropriate input mode. ☞ "To Select The External Input Mode" on page 35.

- When using the AV2 IN/DECODER connector, make sure "AV2 SELECT" is set to "AV2" (☞ pg. 35).

3

SET EDIT MODE

See "Editing Mode Setting" on page 34.

4

START SOURCE PLAYER

Engage its Play mode.

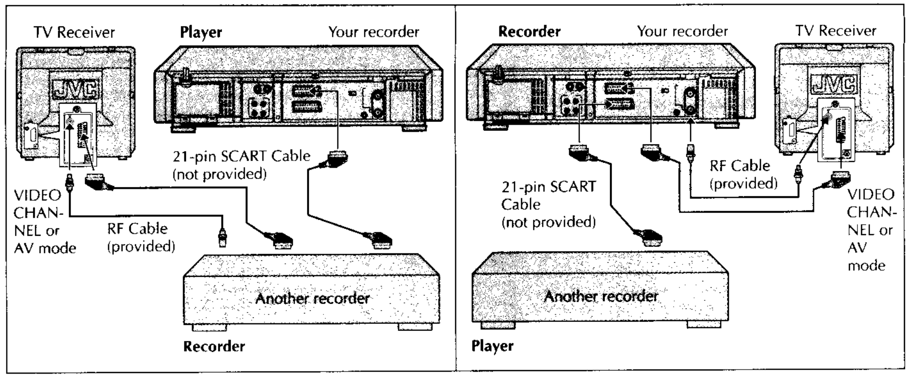
5

START RECORDING DECK

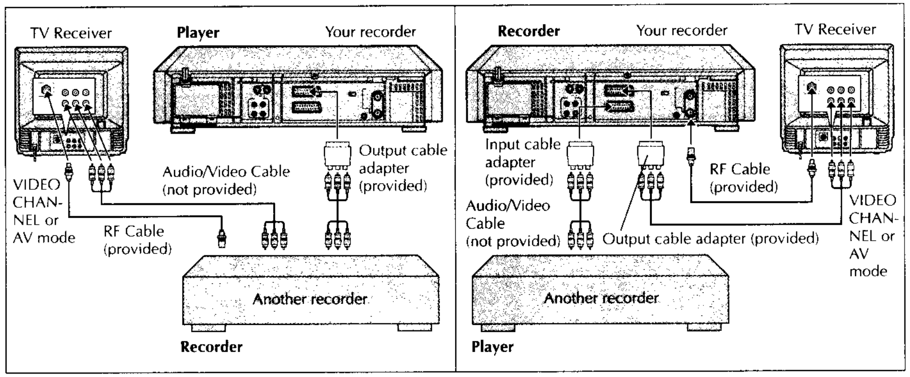
Engage its Record mode.

NOTES:

- *All necessary cables can be obtained from your dealer.*
- *Be sure to set "EDIT" back to "OFF" when you finish editing. (☞ pg. 34)*

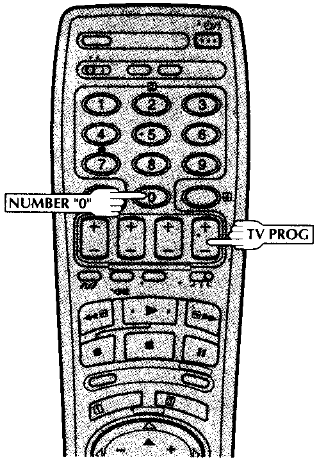

TV Receiver
Player
Your recorder
21-pin SCART Cable (not provided)
VIDEO CHANNEL or AV mode
RF Cable (provided)
Another recorder
Recorder
Recorder
Your recorder
TV Receiver
21-pin SCART Cable (not provided)
RF Cable (provided)
VIDEO CHANNEL or AV mode
Another recorder
Player

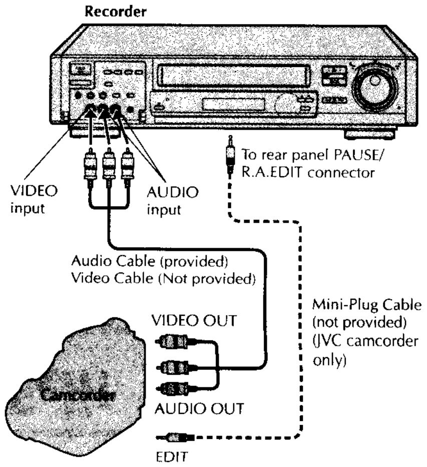
For Customers in Australia and New Zealand:
When connecting the AV cable, use the input and/or output cable adapter as illustrated below.


TV Receiver
Player
Your recorder
Output cable adapter (provided)
Audio/Video Cable (not provided)
VIDEO CHANNEL or AV mode
RF Cable (provided)
Another recorder
Recorder
Recorder
Your recorder
TV Receiver
Input cable adapter (provided)
RF Cable (provided)
Audio/Video Cable (not provided)
Output cable adapter (provided)
VIDEO CHANNEL or AV mode
Another recorder
Player

Edit From A Camcorder

Set the **PAL/MESECAM** switch to the appropriate position. ☞ pg. 16


NUMBER "0"
TV PROG


Recorder
VIDEO input
AUDIO input
To rear panel PAUSE/ R.A.EDIT connector
Audio Cable (provided)
Video Cable (Not provided)
VIDEO OUT
AUDIO OUT
EDIT
Mini-Plug Cable (not provided) (JVC camcorder only)
Camcorder

Player

You can use a camcorder as the source player and your video recorder as the recorder.

1 MAKE CONNECTIONS

Connect the camcorder's AUDIO/VIDEO OUT connectors to the recorder's front panel AUDIO/VIDEO input connectors.

- When using a monaural camcorder, connect its AUDIO OUT connector to the AUDIO IN L input connector on your recorder.
- When a Master Edit Control-equipped JVC camcorder is used, the camcorder is capable of controlling the recorder. Refer to the camcorder's instruction manual for operating procedure.

2 SET RECORDER'S INPUT MODE

Press **NUMBER** key "0" or **TV PROG** so that "F-AU" appears in place of a channel position number.

- Refer to "To Select The External Input Mode" on page 35.

3 SET EDIT MODE

See "Editing Mode Setting" on page 34.

4 START CAMCORDER

Engage its Play mode.

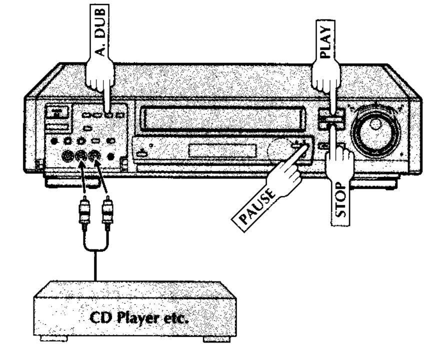
5 START RECORDER

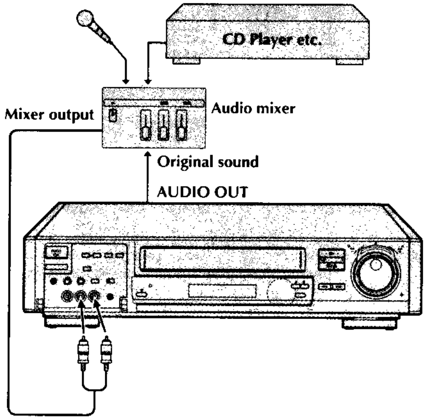
Engage its Record mode.

NOTE:

Be sure to set "EDIT" back to "OFF" when you finish editing. (☞ pg. 34)

Audio Dubbing

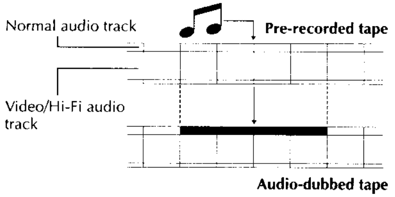

A. DUB
PLAY
PAUSE
STOP
CD Player etc.


CD Player etc.
Mixer output
Audio mixer
Original sound
AUDIO OUT

NOTES:

- *When monitoring the sound during Audio Dubbing, the normal soundtrack is automatically selected. If you wish to hear the mixed sound (Hi-Fi + Normal soundtracks), press **AUDIO MONITOR** on the remote control to select "L+R+NORM" (☞ pg. 18).*
- *Audio dubbing stops automatically when the counter reaches "0:00:00", and the recorder enters the Play mode. Check the counter reading before dubbing.*
- *Audio dubbing is also possible using the rear panel AV1 IN/OUT or AV2 IN connector. When using these connectors, make sure to select the correct input mode in step **2**.*
- *Audio dubbing cannot be performed on a cassette that has had its record safety tab removed.*
- *When playing back an audio-dubbed tape, press **AUDIO MONITOR** on the remote control to select the soundtrack you wish to hear (☞ pg. 18).*

Audio dubbing replaces the normal audio sound of a previously recorded tape with a new soundtrack.


Normal audio track
Pre-recorded tape
Video/Hi-Fi audio track
Audio-dubbed tape

1 MAKE CONNECTIONS

Connect an audio component to the AUDIO IN L + R connectors on the recorder's front panel.

- When connecting monaural equipment, use only the recorder's AUDIO IN L connector.

2 SET INPUT MODE

Press **NUMBER** key "0" or **TV PROG** so that "F-AU" appears in place of a channel number.

- Refer to "To Select The External Input Mode" on page 35.

3 LOCATE START POINT

Press **PLAY** to start playback of the tape in your recorder, and press **PAUSE** when you find the point where you want to start dubbing.

4 ENGAGE AUDIO DUBBING

Press **A. DUB**.

- Your recorder enters the Audio Dubbing Pause mode. (" ○ " blinks, " ▷ " and " ▯▯ " light up on the front display panel.)
- To perform audio dubbbing with audio mixing, press **AUDIO MONITOR** on the remote control to select "L + R" at this point. *Audio dubbing with audio mixing is not possible if you're using a monaural audio component, or if you don't have an audio mixer.

5 START DUBBING

Engage the audio component's Play mode, then press **PLAY** to start the tape in your recorder. Audio dubbing begins at this point.

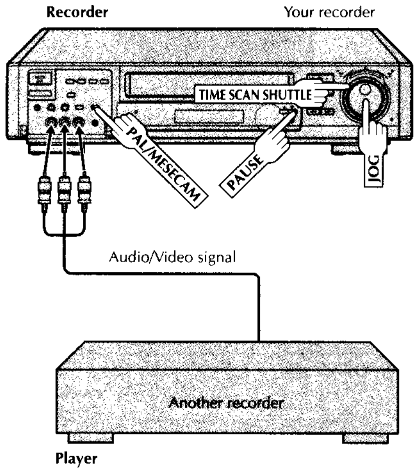
- " ○ " blinks and " ▷ " is displayed on the front display panel.
- To stop dubbing temporarily, press **PAUSE**. Press **PLAY** to resume dubbing.

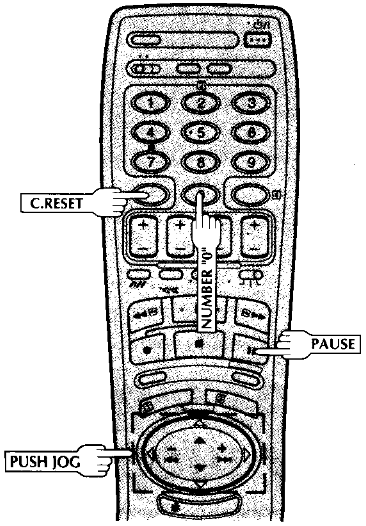
6 END AUDIO DUBBING

Press **STOP** to stop the tape in your recorder, and engage the audio component's Stop mode.

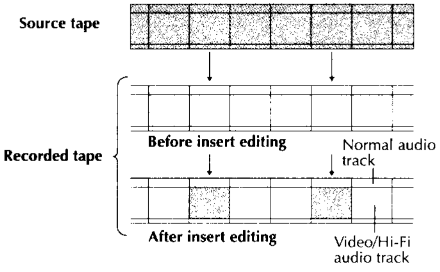
Insert Editing

Set the **PAL/MESECAM** switch to the appropriate position.
☞ pg. 16





Insert editing replaces part of the recorded scene with new material. Both the picture and Hi-Fi audio soundtrack are replaced with new ones, while the normal audio soundtrack remains unchanged. If you wish to change the normal audio track as well, use the audio dubbing function simultaneously. Use your video recorder as the recorder.



1 MAKE CONNECTIONS

Connect the player's VIDEO OUT and AUDIO OUT connectors to your recorder's VIDEO IN and AUDIO IN on the front panel.

2 SET INPUT MODE

Press **NUMBER** key "0" or **TV PROG** so that "F-AU" appears in place of a channel number.

- Refer to "To Select The External Input Mode" on page 35.

3 LOCATE END POINT

Load the recording cassette into your recorder, and play it back to determine the edit-out point (the end of the segment to be replaced) using the **JOG/TIME SCAN SHUTTLE** controls or **PUSH JOG** ◁ ▷ and **PAUSE**.

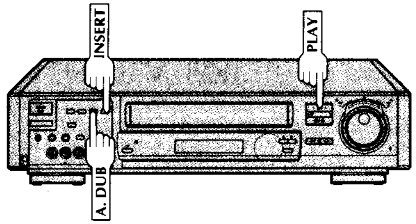
4 RESET THE COUNTER

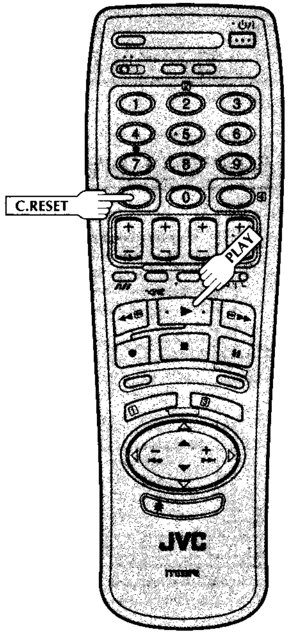
Press **C.RESET** to change the counter display to "0:00:00".

5 LOCATE START POINT

Determine the edit-in point (the beginning of the segment to be replaced) using the **JOG/TIME SCAN SHUTTLE** controls or **PUSH JOG** ◁ ▷ and **PAUSE**.

- Be sure to engage the Still mode at the edit-in point.





6 ENGAGE INSERT EDITING

Press **INSERT**.

- Your recorder enters the Insert-Pause mode. (" ○ ", " ▷ " and " ▯▯ " light up on the front display panel.)
- The TV screen changes from the still picture to the input source you are going to record.

7 START EDITING

Load the source cassette and play back the segment that is to be inserted. When you reach the start of the section of the source tape that you wish to insert, press **PLAY** to start the tape in your recorder; Insert Editing begins at this point.

- " ○ " and " ▷ " are displayed on the front display panel.

8 END INSERT EDITING

At counter "0:00:00", Insert Editing will stop automatically while the tape continues running in the Play mode. if you wish to stop Insert Editing before the specified edit-out point, press **C.RESET**.

FOR AV INSERT EDITING

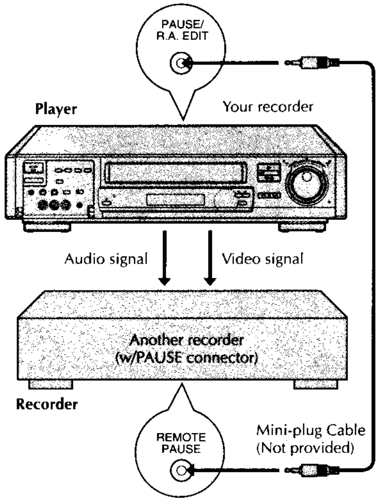
If you want to replace the picture, Hi-Fi audio soundtrack and normal audio soundtrack all at the same time...
In step **6** above, after you press **INSERT**, press **A. DUB** also.
(" ○ " and " ▷ " blink and " ▯▯ " lights up on the front display panel.)

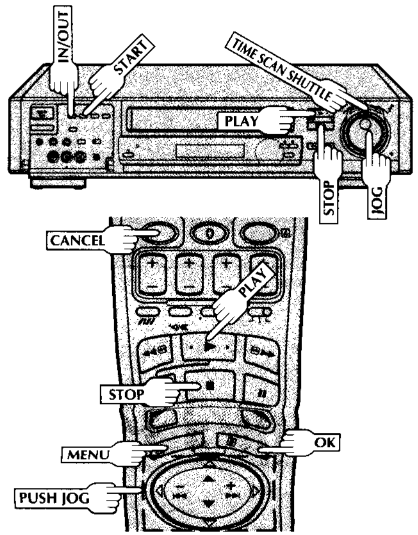
NOTES:

- *Suitable leads can be obtained from your dealer.*
- *Insert editing is not possible with cassettes whose safety tab has been removed.*
- *When insert editing is performed on a tape that has been recorded on another video recorder, the inserted portion may appear distorted.*
- *In insert editing, the recording speed (SP/LP) is determined by the previous recording to be replaced. If the previous recording's speed changes within a single edit, the inserted picture will be distorted at the switching point.*
- *A small portion of the recording which precedes an insert edit may become erased.*
- *Insert Editing is also possible using the rear panel AV1 IN/OUT or AV2 IN connector. When using these connectors, make sure to select the correct input mode in step **2**.*

Random Assemble Editing

Set the **PAL/MESECAM** switch to the appropriate position. ☞ pg. 16





This function makes it easier to create edited videos when your video recorder is used as the source player in combination with another JVC video recorder equipped with a Remote PAUSE Connector. You can pre-program up to 8 scenes or "cuts" for automatic editing in the sequence you have specified.

You can also perform Random Assemble Editing with a second non-JVC recorder. ☞ pg. 43

1 MAKE CONNECTIONS

Connect your recorder's AV1 IN/OUT connectors to the VIDEO IN and AUDIO IN connectors on the recording deck, and connect your recorder's PAUSE/R.A. EDIT connector to the PAUSE connector on the recording deck.

- If the recording deck doesn't have a PAUSE connector, connect to the R.A. EDIT connector instead.
- The Mini-plug cable is a mono 3.5 mm mini-plug to mono 3.5 mm mini-plug connector.

2 PREPARE FOR EDITING

Insert the cassette to be recorded on into the recorder and set the recorder's input mode.

3 LOAD SOURCE CASSETTE

Insert the source cassette into your recorder.

4 SET EDIT MODE

See "Editing Mode Setting" on page 34.

5 START SOURCE PLAYBACK

Press **PLAY**.

6 ACCESS MAIN MENU SCREEN

Press **MENU** twice.

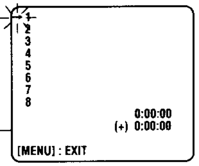
7 ACCESS R.A. EDIT SCREEN

Press **PUSH JOG** △▽ to move the highlight bar (pointer) to "R.A.EDIT", then press **OK**.

- The screen is superimposed on the video playback in step **8**.

8 LOCATE EDIT-IN POINT

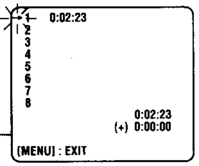
Find the point on the source tape from where you want the edited scene to begin by pressing **PUSH JOG** ◁ ▷ or using the **TIME SCAN SHUTTLE** ring or the **JOG** dial, then press **IN/OUT**.



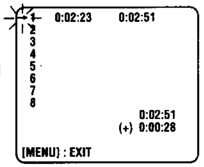
- The edit-in point is registered in memory and appears on the screen.
- You can also perform an Index Search (if index marks have been previously recorded on the tape at the desired points) to find the points you want, but this will result in reduced accuracy.

9 LOCATE EDIT-OUT POINT

Find the point where you want the edited scene to end by pressing **PUSH JOG** ◁ ▷ or using the **TIME SCAN SHUTTLE** ring or the **JOG** dial, then press **IN/OUT**.



- The edit-out point is registered in memory and appears on the screen.
- The total time of the edited scenes is displayed to the right of "(+)".
- Repeat steps **8** and **9** for each additional scene.



10 PREPARE RECORDING DECK

Engage its Record-Standby mode.

11 START R.A. EDIT

Press **START**.

- Automatic editing begins; all the specified scenes are copied to the recording deck in the order they were registered.
- The on-screen display remains while your recorder searches for each scene (blinking cursor indicates scene currently being searched for), but disappears during actual editing.
- During scene search, the recording deck automatically enters its Record-Standby mode.
- When all registered scenes have been edited, your recorder enters the Pause mode, the recording deck enters its Record-Standby mode, and the cursor blinks at the next available number.

12 END R.A. EDIT

Press **MENU** to return to the normal screen, and engage the Stop mode for your recorder and for the recording deck.

NOTES:

- *You can also monitor the sound when searching for scenes you want to edit in steps **8** – **9**. Since you can hear the soundtrack during selection, you can avoid abrupt or unnatural sounding scene-to-scene transitions. The sound that is heard, however, is not TimeScan Audio.*
- *When editing, there may be a discrepancy of about 2 seconds on the source tape between the locations you chose as edit-in/-out points and the locations your recorder recognizes as those points.*
- *For any scene, the edit-out point must have a counter reading that is at least 1 second after the corresponding edit-in point. Any less than 1 second and the edit-out point will not be registered.*
- *Since the source recorder prerolls during Random Assemble Editing, there must be at least 15 seconds worth of recorded material prior to any edit-in point on the source tape.*
- *If the search time for an edit-in point exceeds 5 minutes, the recording deck enters its Stop mode and editing will not take place.*
- *During steps **8** and **9** — if you engage the Pause mode while registering edit-in and -out points in the R.A. Edit screen, the characters in the on-screen display may become distorted. This is normal.*

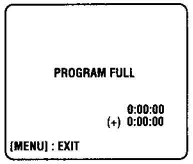
To Make Corrections . . .

. . . during step **8** or **9**, you can cancel registered in and out points by pressing **CANCEL** on the remote control. Each time you press, the preceding point is erased.

- If, for example, you have registered 5 sets of in and out points and want to reset the first set, you have to press **CANCEL** until all points after the first set have been erased. Reenter them after you've repaired the first set of points.

Memory Capacity

Random Assemble Editing shares memory space with the recorder's timer. If there are programs occupied by timer-recording data, those spaces cannot be used to register edit-in and -out points — meaning you won't be able to edit 8 scenes.



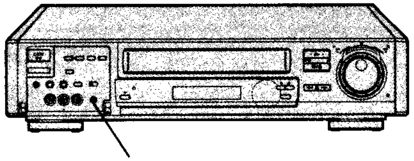
- When all 8 programs are full, "PROGRAM FULL" appears on the R.A. EDIT screen.
- To cancel a program, see page 32.

RM-V704U Multi-Brand R.A. Edit Controller (Not provided)

By connecting this controller to your recorder's R.A. EDIT connector, you can perform Random Assemble Editing in combination with a second non-JVC video recorder. The controller is compatible with various major recorder brands. For compatible systems and availability, please consult your JVC dealer.

NOTE:

Although the RM-V704U is designed to operate the recording deck, it may not work with some recorders, or may have limited function capability.



J Terminal (JLIP(Joint Level Interface Protocol) Connector)

The J Terminal is used to connect the recorder to a personal computer or similar device to allow computerized control of the recorder during editing and certain other operations.

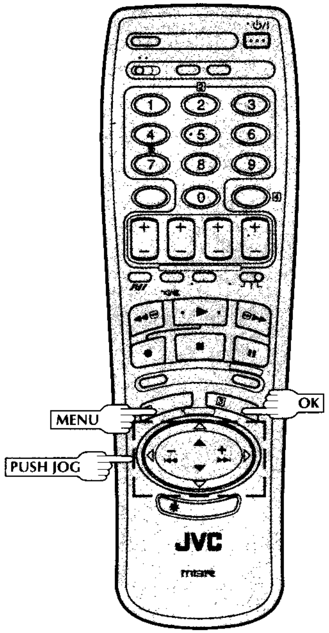
Examples:

- Enables Random Assemble Editing of up to 99 segments with the optional JLIP PLAYER PACK HS-V1EG, using this recorder as the playback unit.
- Allows you to capture still images from the recorder into a personal computer with the optional JLIP VIDEO CAPTURE BOX GV-CB1E.

For further details consult your nearest JVC dealer. Information (in English) is also available at one of JVC's World Wide Web sites at http://www.jvc-victor.co.jp/

JLIP ID Number

Your recorder has its own JLIP ID number. This ID number must be unique when your recorder is connected to another device via its J terminal. The ID Number is preset to "1" at the factory. You can change this number to any number between "1" and "99". If it is necessary to change the JLIP ID number perform the following steps.

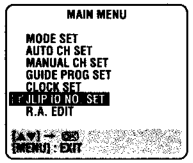


1 ACCESS MAIN MENU SCREEN

Press **MENU** twice.

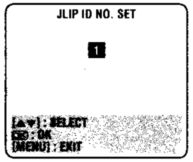
2 ACCESS JLIP ID NO. SET SCREEN

Press **PUSH JOG** △▽ and move the highlight bar (pointer) to "JLIP ID NO. SET", then press **OK**.



3 SET JLIP ID NUMBER

Press **PUSH JOG** △▽ to enter the desired ID number.


JLIP ID NO. SET

1

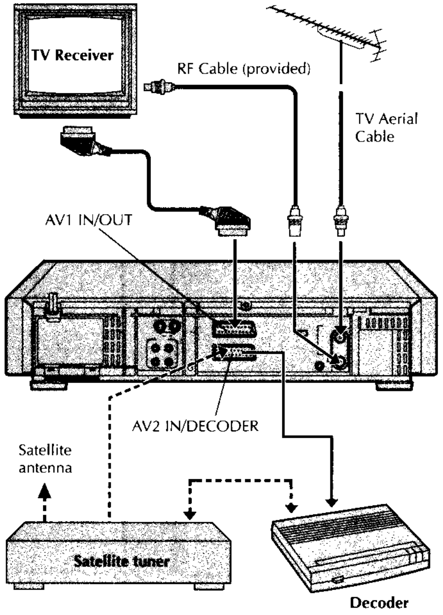
4 RETURN TO NORMAL SCREEN

Press **MENU** or **OK**.

ATTENTION

After you change your recorder's JLIP ID number, control signal transmission may not work properly. If this happens, turn off the recorder's power off once, then turn it back on and try again.

Connecting/ Using A Decoder



For Customers in Australia and New Zealand:
When connecting the AV cable, use the input and/or output cable adapter.

The AV2 IN/DECODER connector can be used as an input terminal for an external decoder (descrambler). Simply connect a decoder and you can enjoy the variety of programming that is available through scrambled channels.

1 SELECT INPUT MODE

Set "AV2 SELECT" to "DECODER". (☞ pg. 35)

2 CONNECT DECODER

Connect your recorder's AV2 IN/DECODER connector to the decoder's Euroconnector using a 21-pin SCART cable.

3 SET TUNER

Perform the procedure as described in "When Receiving A Scrambled Broadcast" on page 52.

NOTE:

When Connecting A Satellite Tuner . . .

. . . if you don't have a decoder connect the satellite tuner directly to the video recorder's AV2 IN/DECODER connector.

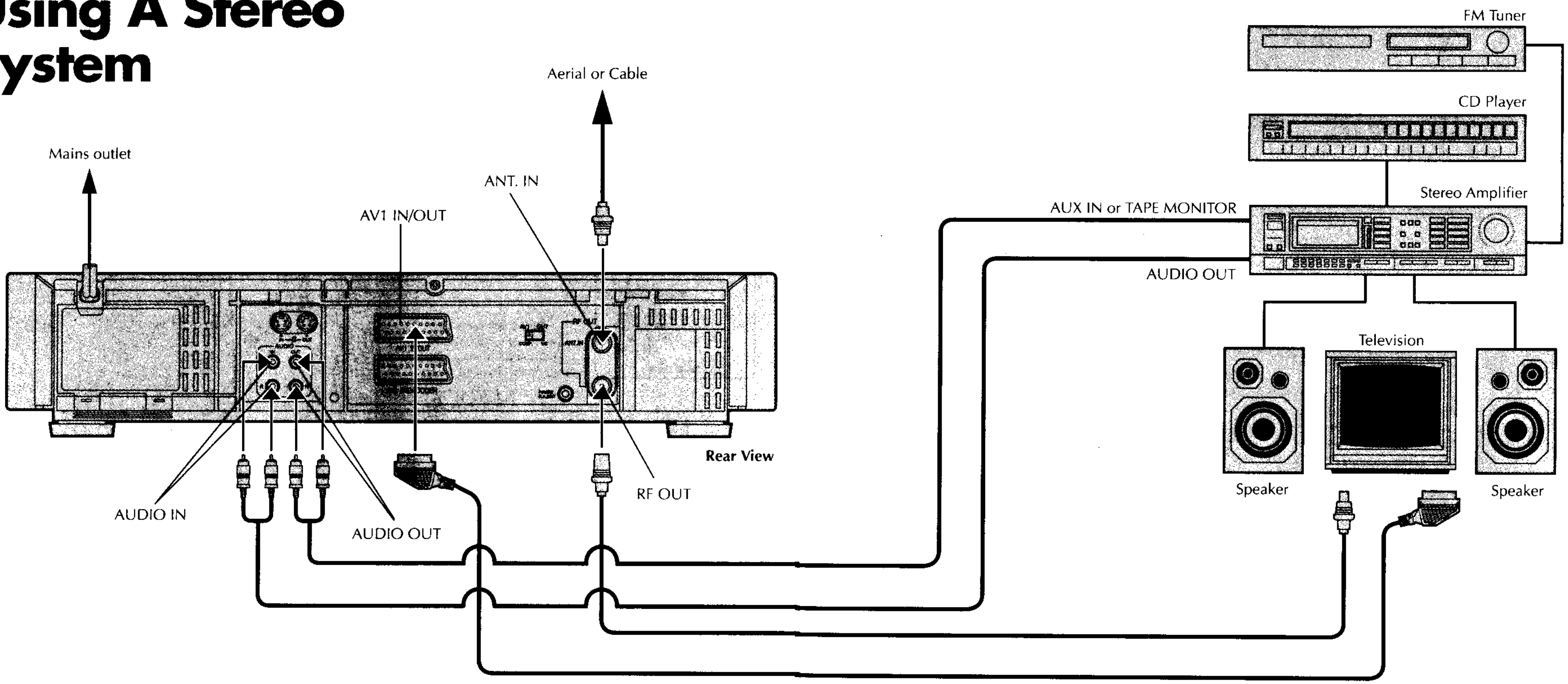
. . . if you have a decoder, first connect the decoder to the decoder input of the satellite tuner, then connect the satellite tuner's output to the recorder's AV2 IN/DECODER connector. Refer to the instruction book for the satellite tuner and decoder.

. . . set "AV2 SELECT" to "AV2". (☞ pg. 35)

*. . . to view a programme via the satellite tuner, select AU 2 mode by pressing **NUMBER** key "0" and **AV/S SELECT** so that "AU-2" appears on the display panel. (☞ pg. 35)*

Connecting/ Using A Stereo System

These instructions enable you to connect your video recorder to your Hi-Fi stereo system (if you have one) and listen to the soundtrack through the stereo.


Aerial or Cable
Mains outlet
ANT. IN
AV1 IN/OUT
Rear View
AUDIO IN
AUDIO OUT
RF OUT
FM Tuner
CD Player
Stereo Amplifier
AUX IN or TAPE MONITOR
AUDIO OUT
Television
Speaker
Speaker

1 MAKE CONNECTIONS

a– Connect the AUDIO IN L and R on your video recorder to the audio output connectors on your amplifier.
b– Connect the AUDIO OUT L and R connectors on your video recorder to the AUX IN or TAPE MONITOR terminals on your stereo system's receiver or amplifier.

NOTES:

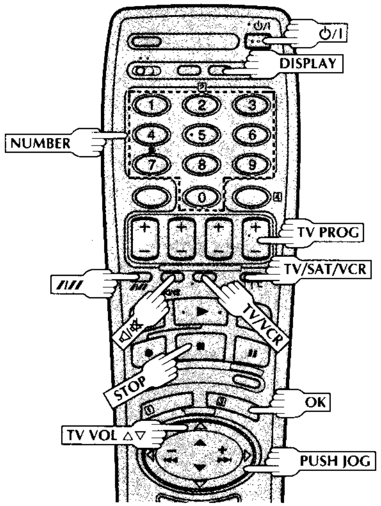
- *When connecting your recorder's audio output connectors to a stereo amplifier, make sure you connect L and R correctly.*
- *If stereo or bilingual TV broadcasts are receivable in your area, this recorder can record them independently of the TV set and play them back through the connected stereo system.*
- *When listening to sound through the connected stereo system, turn the TV's volume down completely.*

CAUTIONS:

- This recorder has a dynamic range of more than 80 dB with regards to its Hi-Fi audio capability. It is recommended that you check the maximum level if you are going to listen to the Hi-Fi audio signals through a stereo amplifier. A sudden surge in the input level to the speakers may damage them.
- Some speakers and televisions are specially shielded to prevent television interference. If both are of the non-shielded type, do not place the speakers adjacent to the TV set as this can adversely affect the video playback picture.

For customers in Australia and New Zealand:
When connecting the AV cable to your TV, use the input and output cable adapters.

TV Multi-Brand Remote Control



Control Your TV Using Additional Buttons

The **NUMBER** keys on the remote can also be used to select the TV's channel by setting the remote control to the TV mode.

1. Set the **TV/SAT/VCR** switch to TV.
2. Use the **NUMBER** keys, and the **/II/ (Digit Entry)** button, the **PUSH JOG** button, the **DISPLAY** button or the **OK** button to select the TV's channel.

- With televisions under Code 01, 02, 03, 04, 06, 07, 09, 10, 13, 14 or 22, the **/II/** button corresponds to the 1-digit/2-digit entry switching button (often labelled –/– –) of your TV's remote control.
- With televisions under Code 01, 11 or 12, the **PUSH JOG** ◁ button corresponds to the 10 + button, and the **PUSH JOG** ▷ button corresponds to the 20 + button of your TV's remote control.
- With televisions using Code 12, the **DISPLAY** button corresponds to the 30 + button.
- With televisions using Code 09, the **OK** button corresponds to the ENTER button of your TV's remote control.

NOTE:

The way these buttons are used is determined by your TV. Use these buttons as instructed for your TV's remote control.

Your remote control can operate the basic functions of your TV set. In addition to JVC TVs, other manufacturer's TVs can also be controlled by setting the appropriate switch on the remote control.

Before you start . . .
- Turn on the TV using its remote control.
- Set the remote control's **TV/SAT/VCR** switch to TV.

1 SET TV BRAND CODE

Refer to the chart below. While holding down ⏻/I, enter your TV's brand code using the **NUMBER** keys, then press **STOP**.

- JVC has four codes. If the TV does not function with one code, try entering another.
- You don't have to repeat this step until you replace your remote control's batteries.

2 TRY OPERATING TV

Press ⏻/I on the remote to turn the TV off. If it goes off, try other operations.

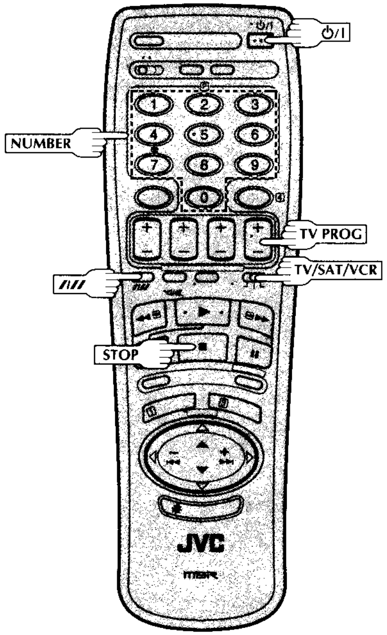
- The ⏻/I button, **TV/VCR** button, **TV PROG +/–** button, **TV VOL △▽** button and **🔈/🔇 (Mute)** button on the remote can all be used to operate the TV.
- To return the remote to video recorder control, set its **TV/SAT/VCR** switch to VCR.

IMPORTANT

Although the provided remote control unit is compatible with JVC televisions, as well as many other models, it may not work with your TV, or in some instances, may have limited function capability.

TV BRAND NAME	CODE
JVC	01, 02, 03, 04
BRANDT	05
NORDMENDE	05
SABA	05
TELEAVIA	05
TELEFUNKEN	05
THOMSON	05
FERGUSON	06
PHILIPS	07
BLAUPUNKT	08
GRUNDIG	08
SONY	09
PANASONIC	10
GRAETZ	11
ITT	11
LUXOR	11
SALORA	11
SELECO	11
MIVAR	12
HITACHI	13
TOSHIBA	14
MITSUBISHI	15
FINLUX	16
NOKIA	17
SHARP	18
FUNAI	20
NEC	22

Satellite Tuner Multi-Brand Remote Control



Your remote control can operate the basic functions of your satellite tuner set. In addition to JVC satellite tuners, other manufacturer's satellite tuners can also be controlled by setting the appropriate switch on the remote control.

Before you start . . .
- Turn on the satellite tuner using its remote control.
- Set the remote control's **TV/SAT/VCR** switch to SAT.

1 SET SATELLITE TUNER BRAND CODE

Refer to the chart below. While holding down ⏻/I, enter your satellite tuner's brand code using the **NUMBER** keys, then press **STOP**.

- Some satellite tuner brands have more than one code. If the satellite tuner does not function with one code, try entering another.
- You don't have to repeat this step until you replace your remote control's batteries.

2 TRY OPERATING SATELLITE TUNER

Press ⏻/I on the remote to turn the satellite tuner off. If it goes off, try other operations.

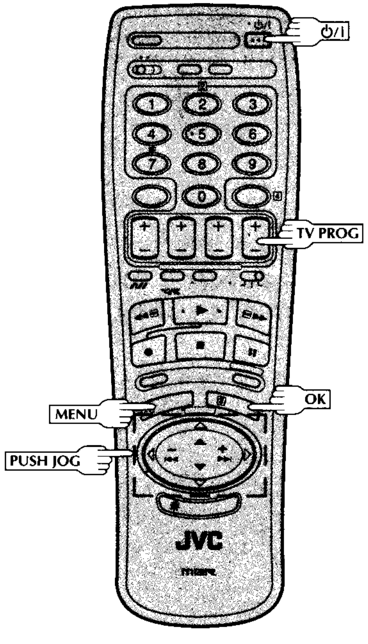
- The ⏻/I button, **TV PROG +/–** button, **NUMBER** buttons on the remote can all be used to operate the satellite tuner.
- The **NUMBER** buttons will not work with JVC satellite tuners using code 13.
- With satellite tuners using Code 16, the **/II/** button corresponds to the ENTER button of your satellite tuner's remote control.
- To return the remote to video recorder control, set its **TV/SAT/VCR** switch to VCR.

IMPORTANT

Although the provided remote control unit is compatible with JVC satellite tuners, as well as many other models, it may not work with your satellite tuner, or in some instances, may have limited function capability.

SATELLITE TUNER BRAND	CODE
JVC	13, 14
AMSTRAD	01, 02, 03, 04
SIEMENS	05
GRUNDIG	05, 06
KATHREIN	05, 11, 12
PACE	06, 08
PHILIPS	07
ITT	09
NOKIA	09
SKYMASTER	10
RFT	10
MASPRO	11
BT	13
PANASONIC	15
JERROLD	16

Turn on the TV and select the VIDEO channel (or AV mode).



IMPORTANT
Perform the following steps only if auto channel set has not been set correctly by Auto Set Up function (☞ pg. 6) or if you have moved to a different area or if a new station starts broadcasting in your area.

Your recorder needs to memorise all necessary stations in channel positions in order to record TV programmes. Auto Channel Set automatically assigns all receivable stations in your area so that you can call them up with the **TV PROG** buttons without going through any vacant channels.

Auto Channel Set

1 TURN ON THE RECORDER

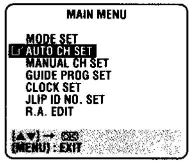
Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

Press **MENU** twice.

3 ACCESS COUNTRY SET SCREEN

Press **PUSH JOG**△▽ to move the highlight bar (pointer) to "AUTO CH SET", then press **OK**.



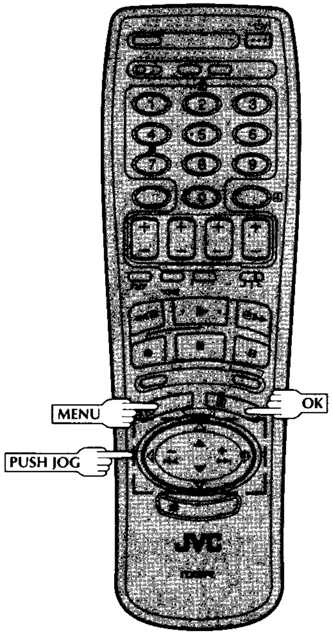
MAIN MENU

MODE SET
☞ AUTO CH SET
MANUAL CH SET
GUIDE PROG SET
CLOCK SET
JLIP ID NO. SET
R.A. EDIT

[▲▼] → [OK]
[MENU] : EXIT

4 SELECT COUNTRY

Press **PUSH JOG**△▽ to move the highlight bar (pointer) to your country's name, then press **OK**. The Language Set screen appears.

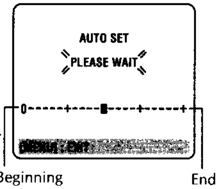


IMPORTANT

- Depending on the reception conditions, the station names may not be stored correctly, and auto Guide Program Number Set may not work properly. If the Guide Program numbers are not set properly, SHOWVIEW timer recording (☞ pg. 28) will not work correctly; be sure to check if the Guide Program numbers have been set correctly (☞ pg. 12, "SHOWVIEW Setup").
- Since your video recorder memorizes all detected stations even if the reception condition is poor, some of those stored stations may produce a noisy picture. To delete those stations, ☞ "Delete A Channel" on page 52.

5 PERFORM AUTO CHANNEL SET

Press **PUSH JOG**△▽ to move the highlight bar (pointer) to the language of your choice , then press **OK** to initiate Auto Channel Set.



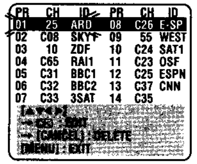
AUTO SET
PLEASE WAIT

[MENU] : EXIT

- The Auto Set screen appears, and remains on screen while the recorder searches for receivable stations. As Auto Channel Set progresses, the "█" mark on the screen moves from left to right. Wait until the screen as shown in step **6** appears.

6 VIEW CONFIRMATION SCREEN

The stations your recorder located appear on a Confirmation screen — channel positions (PR), channels (CH) and station names (ID- ☞ pg. 54). To view the next page of the listing, press **PUSH JOG**△▽◁▷. The blueback screen and the program currently being broadcast by the blinking station appear alternately for 5 seconds each.



```
PR  CH   ID    PR  CH   ID
01  25   ARD   08  C26  E-SP
02  C08  SKY   09   55  WEST
03  10   ZDF   10  C24  SAT1
04  C65  RAI1  11  C23  OSF
05  C31  BBC1  12  C25  ESPN
06  C32  BBC2  13  C37  CNN
07  C33  3SAT  14  C35
[▲▼◀▶]
→ [OK] : EDIT
→ [CANCEL] : DELETE
[MENU] : EXIT
```

C: Cable

- The stations located in the selected country appear at the top of the list.
- The Guide Program numbers will also be set automatically during Auto Channel Set.

7 RETURN TO NORMAL SCREEN

Press **MENU**.

- Depending on the reception conditions, the stations may not be stored in order, and the station names may not be stored correctly.
- Using the Confirmation screen, you can skip or add channel positions, enter station names and perform other operations. Refer to pages 52 – 53 for the procedures.
- For information on scrambled broadcasts, refer to page 52.

NOTE:

Fine tuning is performed automatically during Auto Channel Set. If you want to perform it manually, refer to page 53.

Storing Channels Manually

Store channels that were not stored during Auto Set Up (☞ pg. 6) or Auto Channel Set (☞ pg. 50).

* In Australia and New Zealand, channels cannot be stored properly even though the following procedure is performed.

1

ACCESS MAIN MENU

Press **MENU** twice.

2

ACCESS CONFIRMATION SCREEN

Press **PUSH JOG**△▽ to move the highlight bar (pointer) to "MANUAL CH SET", then press **OK**. The Confirmation screen appears.

3

SELECT POSITION

Press **PUSH JOG**△▽ ◁▷ until an open position in which you want to store a channel begins blinking, then press **OK**. The Manual Ch. Set screen appears.

4

INPUT CHANNEL

The number "01" appears blinking beneath "CH".
Press the **NUMBER** keys to input the channel number you want to store.

- For fine tuning adjustment, press **PUSH JOG** ▷ until the item beneath "CH" begins blinking, then press **PUSH JOG**△▽. While tuning, "F+" or "F–" appears.
- If necessary, to change the band between CH(regular) and CC(cable), press **PUSH JOG**◁▷until CH or CC is blinking, then press **PUSH JOG** △▽ to select the band.
- When storing a channel that sends scrambled broadcasts, press **PUSH JOG**▷ until "OFF" (Decoder setting) blinks, then press **PUSH JOG**△▽ to set "DECODER" to "ON" ("OFF" is the default setting).

5

ENTER NEW CHANNEL INFORMATION

Press **OK** and the Confirmation screen appears.

- Repeat steps **3** through **5** as necessary.

6

CLOSE CONFIRMATION SCREEN

Press **MENU**.

- To input the station name, see page 53.
- To change positions, see "Change Station Channel Position" (at right).

When Receiving A Scrambled Broadcast
Make sure that "AV2 SELECT" is set to "DECODER" (☞ pg. 35).
1– Perform steps **1** and **2** above.
2– Press **PUSH JOG**△▽◁▷ to select the position of the channel broadcasting the scrambled programmes, then press **OK** three times.
3– Press **PUSH JOG**▷ until "OFF (Decoder setting)" begins blinking, and set it to "ON" by pressing **PUSH JOG**△▽.
4– Press **OK** to access the Confirmation screen.
● Repeat steps **2 – 4** for each additional channel.
5– Press **MENU**.

Perform steps **1** and **2** of the previous procedure to access the Confirmation screen before continuing.

Delete A Channel

1

SELECT ITEM

Press **PUSH JOG**△▽◁▷ until the item you want to delete begins blinking.

2

DELETE CHANNEL

Press **CANCEL**.

- The item directly beneath the cancelled one moves up one line.
- Repeat steps **1** and **2** as necessary.

3

CLOSE CONFIRMATION SCREEN

Press **MENU**.

Change Station Channel Position

1

SELECT ITEM

Press **PUSH JOG**△▽◁▷ until the item you want to move begins blinking. Then press **OK** and the station name (ID) and its channel (CH) number begin blinking.

2

SELECT NEW POSITION

Press **PUSH JOG**△▽◁▷ to move the station to the new channel position, then press **OK**.

Example: If you moved the station in position 3 to position 7, the stations originally in positions 4–7 each move up one space.

- Repeat steps **1** and **2** as necessary.

3

CLOSE CONFIRMATION SCREEN

Press **MENU**.

Perform steps **1** and **2** of "Storing Channels Manually" on page 52 to access the Confirmation screen before continuing.

Set Stations (A)

1

SELECT ITEM

Press **PUSH JOG**△▽◁▷ until the item you want begins blinking. Then press **OK** twice and the station's name (ID) begins blinking.

2

SELECT NEW STATION

Press **PUSH JOG**△▽ until the new station's name (ID) you want to store begins blinking.
Registered station names (☞ pg. 54) appear as you press **PUSH JOG**△▽.

3

SWITCH STATIONS

Press **OK**.

- Repeat steps **1** through **3** as necessary.

4

CLOSE CONFIRMATION SCREEN

Press **MENU**.

Set Stations (B)

NOTE:

*First perform step **1** of the above procedure.*

2

SELECT STATION NAME CHARACTER

Press **PUSH JOG** ▷ and the first letter of the station name begins blinking.

3

ENTER NEW CHARACTER

Press **PUSH JOG**△▽ to cycle through the characters (A–Z, 0–9, –, ✱, +, ⌴ (space)) and stop when the desired one is indicated, then press **PUSH JOG** ▷ to enter. Enter the remaining characters the same way (maximum of 4).
After entering all characters, press **OK**.

- Repeat steps **1** through **3** as necessary.
- If you make a mistake, press **PUSH JOG**◁ until the incorrect character begins blinking. Then enter the correct character by pressing **PUSH JOG**△▽

4

CLOSE CONFIRMATION SCREEN

Press **MENU**.

Fine-Tuning Channels Already Stored

1

SELECT CHANNEL TO FINE-TUNE

Press **PUSH JOG**△▽◁▷ until the channel you want to tune begins blinking.

2

ACCESS MANUAL CH. SET SCREEN

Press **OK** three times. The Manual Ch. Set screen appears.

3

PERFORM TUNING

Press **PUSH JOG**△▽ until the picture is its clearest. Then press **OK**.

- The Confirmation screen appears.
- Repeat steps **1** through **3** as necessary.

4

CLOSE CONFIRMATION SCREEN

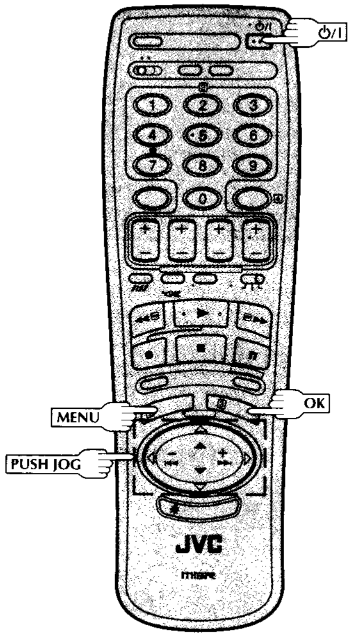
Press **MENU**.

TV Station And ID List

ID*	STATION NAME
1000	TV1000
3SAT	3SAT
ADLT	ADULT
ANT3	ANTENA3
ARD	ARD
ARTE	ARTE
BBC	BBC GROUP
BBC1	BBC1
BBC2	BBC2
BR3	BAYERN3
C+	CANAL PLUS
C1	PORTUGUSES
CAN5	CANALE5
CH4	CHANNEL4
CH5	CHANNEL5
CHLD	CHILD
CINE	CINEMA
CLUB	TELECLUB
CMT	CMT
CNN	CNN
CSUR	ANDALUCIA
DISC	DISCOVERY
DR	DR TV
DRS	DRS
DSF	DSF
ETB1	ETB1
ETB2	ETB2
EURO	EURONEWS
EUSP	EUROSPORTS
FEMM	FEMMAN
FILM	FILM
FNET	FILMNET
FR2	France2
FR3	France3
GALA	GALAVISION
HR3	HESSEN3
INFO	INFO-KANAL
ITA1	ITALIA1
ITA7	ITALIA7
ITV	ITV
JSTV	JSTV
KA2	KA2
KAB1	KABEL1
KAN2	KANAL2
LOCA	LOCAL
M6	M6
MBC	MBR
MCM	MCM
MDR	MDR
MOVE	MOVIE
MTV	MTV
MTV3	MTV3
N3	NORD3
N-TV	N-TV
NBC	NBC SUPER
NDR3	NDR3
NED1	NED1
NED2	NED2
NED3	NED3
NEWS	
NICK	NICKELODEON
NRK	NRK
NRK2	NRK2
ODE	ODEON
ORF1	ORF1
ORF2	ORF2
ORF3	ORF3
OWL3	OWL3
PREM	PREMIERE
PRO7	PRO7
RAI1	RAI1
RAI2	RAI2
RAI3	RAI3
RET4	RETE4
21	TELE21
RTBF	RTBF1 or 2
RTL	RTL
RTL2	RTL2
RTL4	RTL4
RTL5	RTL5
RTP	RTP
S4	SCHWEIZ4
SAT1	SAT1
SBS	SBS
SHOW	SHOW
SIC	SOCIEDADE
SKY	SKY CHANNEL
SKYN	SKY NEWS
SPRT	SPORT
SRTL	SUPER RTL
STAR	STAR-TV
SVT1	SVT1
SVT2	SVT2
SW3	SUEDWEST3
TCC	TCC
TELE	TELE
TEL5	TELE5
TF1	TF1
TM3	TM3
TMC	TELEMONTECARLO
TNT	TNT INT
TRT	TRT INT
TSI	TSI
TSR	TSR
TV1	BRTN TV1
TV2	BRTN TV2
TV3	TV3
TV4	TV4
TV5	TV5
TV6	TV6
TVE1	TVE1
TVE2	TVE2
TVG	TV GALICIA
TVI	TV INDEPENDENT
TVN	TV NORGE
VCR	VIDEO
VERO	VERONICA
VH-1	VH-1
VIVA	VIVA
VIV2	VIVA2
VMTV	VIDEO MUSIC
VOX	VOX
VT4	VT4
VTM	VTM
WDR1	West1
WDR3	West3
YLE1	YLE1
YLE2	YLE2
ZDF	ZDF
ZTV	ZTV

* The "ID" abbreviation is what is shown on-screen in lieu of the station name. The "ID" abbreviation is listed in the Confirmation screen and is displayed on the TV screen when the recorder is tuned to a different station.

Turn on the TV and select the VIDEO channel (or AV mode).



IMPORTANT
Perform the following steps only if auto clock set has not been set correctly by Auto Set Up function (☞ pg. 6) or Auto Channel Set (☞ pg. 50) or if the recorder's memory backup has expired.

If you performed Auto Set Up or Auto Channel Set without ever having set the clock previously, the recorder's built-in clock is also set automatically. The Auto and Manual clock setting procedures are necessary when . . .

- a power outage of more than 60 minutes occurs.
- the tuner has been set manually.
- the user desires to set the clock slightly ahead of the actual time.
- the clock was not set even after Auto Set Up or Auto Channel Set was performed.

Whether you perform Auto or Manual clock setting, you can use the convenient Just Clock function.

Just Clock
The Just Clock function provides accurate time keeping through automatic adjustments at regular intervals, by reading data from a PDC signal.
The Just Clock option appears in the Clock Set and Auto Clock screens, and can be set "ON" or "OFF" (the default setting is "OFF"). Press **OK** until the Just Clock setting begins blinking, then press **PUSH JOG**△▽ to change the setting.

IMPORTANT: If you turn off Just Clock, the accuracy of your recorder's built-in clock may be reduced, which could adversely effect timer recording. We recommend you to keep Just Clock on. In cases where the clock setting data from a PDC signal is incorrect, however, you are advised to keep Just Clock set to "OFF".

* Just Clock does not work in areas where no TV station transmits PDC signals.

Both Auto and Manual clock setting procedures begin from step **4**.

Preparation

1 TURN THE RECORDER ON

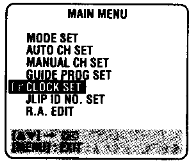
Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

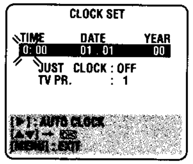
Press **MENU** twice.

3 ACCESS CLOCK SET SCREEN

Move the highlight bar (pointer) to "CLOCK SET" by pressing **PUSH JOG** △▽, then press **OK**. The Clock Set screen appears.


MAIN MENU

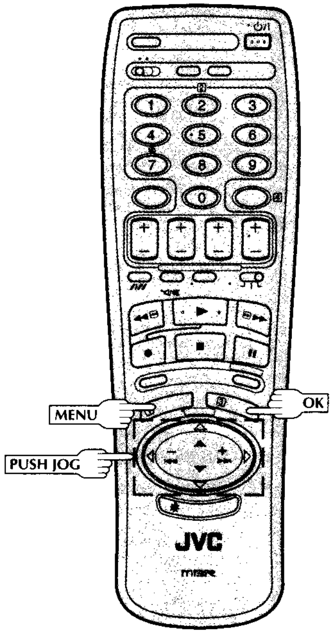
MODE SET
AUTO CH SET
MANUAL CH SET
GUIDE PROG SET
☞CLOCK SET
JLIP ID NO. SET
R.A. EDIT


CLOCK SET

TIME DATE YEAR
0:00 01.01 00
JUST CLOCK : OFF
TV PR. : 1

[▶] : AUTO CLOCK

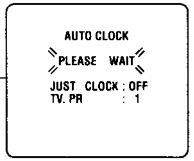
CONTINUED ON NEXT PAGE.



Auto Clock Set

4 SET CLOCK AUTOMATICALLY

At the Clock Set screen, press **PUSH JOG** ▷. The Auto Clock screen appears and clock setting begins.


AUTO CLOCK
PLEASE WAIT
JUST CLOCK : OFF
TV. PR : 1

- If "TV PR." isn't set to the channel position on which Auto Clock data is received, "ERROR" appears, and then the screen from step **3** reappears. To set "TV PR.", press **OK** to place the pointer next to it, then cycle through the numbers by pressing **PUSH JOG**△▽ until the number representing the channel position in which the station transmitting clock setting data is stored appears.

5 RETURN TO NORMAL SCREEN

Once clock setting is completed, press **MENU** to return to the normal screen.

Manual Clock Set

4 SET DATE AND TIME

Press **PUSH JOG**△▽ to set the hour, then press **OK**. The "minutes" display begins blinking. Repeat the procedure to set the minutes, day, month and year.

5 SET JUST CLOCK

The default setting is "OFF". Set as desired by pressing **PUSH JOG**△▽, then press **OK**.

- If you set to "OFF", you can disregard the next step as you won't be able to receive regular clock adjustments.

6 SET CLOCK DATA SOURCE CHANNEL POSITION

The recorder is preset to receive clock setting and adjustment data from channel position 1. Press **PUSH JOG**△▽ to set the channel position to the number representing the station transmitting clock setting data, then press **OK**.

7 START CLOCK OPERATION

Press **MENU**.

NOTES:

- *Auto Clock and Just Clock require a PDC signal, and will not operate with a VPS signal.*
- *Just Clock (when set to "ON") enables adjustment of the recorder's built-in clock every hour on the hour, except for 23:00, 0:00, 1:00 and 2:00.*
- *Just Clock is not effective when . . .*
  - *the recorder's power is on (unless the recorder is tuned to the same channel position selected in the Clock Set screen).*
  - *the recorder is in the Timer mode.*
  - *a difference of more than 3 minutes exists between the built-in clock's time and the actual time.*
- *If Just Clock is set to "ON", the recorder's clock is automatically adjusted at the start/end of Summer Time.*
- *Auto clock setting and Just Clock may not function properly depending on the reception condition.*
- *During Manual clock setting, if the day and month data are invalid (such as 31st April), the month digits are cleared automatically and the day digits begin blinking. Input the correct data.*
- *If in step 4 of the Manual clock setting procedure, the year digits are automatically cleared and the day digits begin blinking, it is possible that you have input 29th February for a non-leap year. Input the correct data.*

Before requesting service for a problem, use this chart and see if you can repair the trouble yourself. Small problems are often easily corrected, and this can save you the trouble of sending your video recorder off for repair.

POWER

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. No power is applied to the recorder.	● The mains power cord is disconnected.	Connect the mains power cord.
2. The clock is functioning properly, but the recorder cannot be powered.	● "◷" is displayed on the display panel with Auto Timer set to "OFF".	Press the **TIMER** button to turn the "◷" indicator off.

TAPE TRANSPORT

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The tape does not run during recording.	● "❚❚" is displayed on the display panel.	Press **PLAY** to turn the "❚❚" indicator off.
2. The tape stops during rewind or fast-forward.	● "M" is displayed on the display panel.	Press **C.MEMORY** to deactivate the Counter Memory function and turn the "M" indicator off.
3. The tape will not rewind or fast-forward.	● The tape is already fully rewound or fast-forwarded.	Check the cassette.

PLAYBACK

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The playback picture does not appear while the tape is running.	● If you're using the RF OUT connection . . . . . . the TV receiver's channel selector is not set to the VIDEO channel. . . . the recorder's VIDEO channel has not been correctly set. ● If you're using the AV or S-VIDEO connection, the TV receiver is not set to the AV mode.	If you are using the RF OUT connection . . . . . . set the TV receiver to the VIDEO channel. (☞ pg. 10) . . . Perform "Video Channel Set" (☞ pg. 10) If you are using the AV or S-VIDEO connection, set the TV to its AV mode.
2. Noise appears during normal playback.	● The automatic tracking mode is engaged.	Try manual tracking. (☞ pg. 16)
3. Noise appears during slow-motion playback.	● The automatic tracking mode is engaged.	Try manual tracking. (☞ pg. 16)
4. Noise appears during still playback.		Press **TV PROG** + or – a few times to remove the noise bars from the screen.
5. Breaks are noticeable in Hi-Fi soundtrack	● Automatic tracking is engaged.	Engage and adjust tracking manually. (☞ pg. 16)
6. The playback picture is blurred or interrupted while TV broadcasts are clear.	● The video heads may be dirty.	Consult your JVC dealer.

RECORDING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Recording cannot be started.	● There is no cassette loaded, or the cassette loaded has had its Record Safety tab removed.	Insert a cassette, or using adhesive tape, reseal the slot where the tab was removed.
2. TV broadcasts cannot be recorded.	● "AU" has been selected as the input mode.	Set to the desired channel.
3. Tape-to-tape editing is not possible.	● The source (another video recorder, camcorder) has not been properly connected. ● All necessary power switches have not been turned on. ● The input mode is not correct.	Confirm that the source is properly connected. Confirm that all units' power switches are turned on. Set the input mode to "AU".

CONTINUED ON NEXT PAGE.

4. Camcorder recording is not possible.	• The camcorder has not been properly connected. • The input mode is not correct.	Confirm that the camcorder is properly connected. Set the input mode to "AU".

TIMER RECORDING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Timer recording won't work.	• The clock and/or the timer have been set incorrectly. • The timer is not engaged.	Re-perform the clock and/or timer settings. Press **TIMER** and confirm that "◷" is displayed on the display panel.
2. On-screen timer programming is not possible.	• Timer recording is in progress.	Timer programming can't be performed while a timer recording is in progress. Wait until it finishes.
3. "◷" and "📼" on the display panel won't stop blinking.	• The timer is engaged but there's no cassette loaded.	Load a cassette with the Record Safety tab intact, or cover the hole using adhesive tape.
4. The cassette is automatically ejected, and "◷" and "📼" on the display panel won't stop blinking.	• The loaded cassette has had its Record Safety tab removed.	Remove the cassette and cover the hole with adhesive tape, or insert a cassette with the Record Safety tab intact.
5. "◷" blinks for 10 seconds and the Timer mode is disengaged.	• **TIMER** has been pressed when there are no programs in memory, or the timer record information has been programmed incorrectly.	Check the programmed data and re-program as necessary, then press **TIMER** again.
6. The cassette is automatically ejected, the power shuts off and "◷" and "📼" won't stop blinking.	• The end of the tape was reached during timer recording.	The programme may not have been recorded in its entirety. Next time make sure you have enough time on the tape to record the entire programme.
7. SHOWVIEW does not timer-record properly.	• The recorder's channel positions have been set incorrectly.	Refer to "Guide Program Number Set" and re-perform the procedure (☞ pg. 12).

OTHER PROBLEMS

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Whistling or howling is heard from the TV during camcorder recording.	• The camcorder's microphone is too close to the TV. • The TV's volume is too high.	Position the camcorder so its microphone is away from the TV. Turn the TV's volume down.
2. When scanning channels, some of them are skipped over.	• Those channels have been designated to be skipped.	If you need the skipped channels, restore them (☞ pg. 52).
3. The channel cannot be changed.	• Recording is in progress.	Press **PAUSE** to pause the recording, change channels, then press **PLAY** to resume recording.
4. The remote control won't operate the TV or satellite tuner.	• The **TV/SAT/VCR** switch is in the wrong position.	Set the switch to the correct position.
5. Channel settings that were made manually seem to have changed or disappeared.	• After the manual settings were made, Auto Channel Set was performed.	Perform manual setting again.
6. No channels are stored in the recorder's memory.	• The TV aerial cable was not connected to the recorder when Auto Set Up was performed.	Connect the TV aerial cable to the recorder properly and turn off the recorder power once, then turn the recorder power back on again. The recorder will try Auto Set Up again (☞ pg. 6).

QUESTIONS AND ANSWERS

PLAYBACK

Q. What happens if the end of the tape is reached during playback or search?
A. The tape is automatically rewound to the beginning.

Q. Can the video recorder indefinitely remain in the still mode?
A. No. It stops automatically after 5 minutes to protect the heads.

Q. When returning from multi-speed search to normal playback, the picture is disturbed. Should I be concerned about this?
A. No, it is normal.

Q. Other than preventing further recording, what effect does removing the Record Safety tab have?
A. It disables marking of index codes.

Q. Sometimes, during Index Search, the video recorder can't find the programme I want to see. Why not?
A. There may be index codes too close together.

RECORDING

Q. When I pause and then resume a recording, the end of the recording before the pause is overlapped by the beginning of the continuation of recording. Why does this happen?
A. This is normal. It reduces distortion at the pause and resume points.

Q. Can the video recorder indefinitely remain in the Record-Pause mode?
A. No. The video recorder goes to its Stop mode automatically after 5 minutes to protect the heads.

Q. What happens if the tape runs out during recording?
A. The video recorder automatically rewinds it to the beginning.

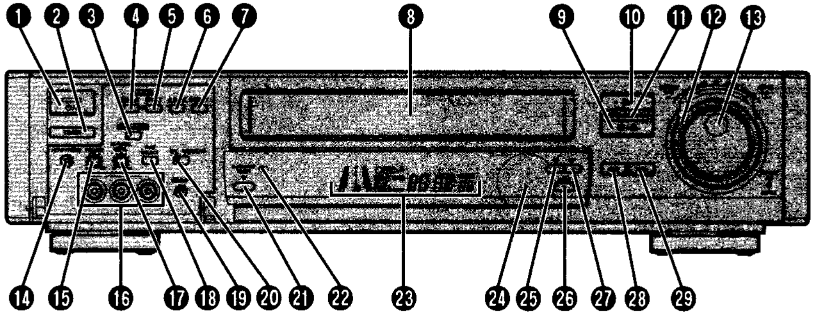
TIMER RECORDING

Q. " ○ " and "◷" remain lit on the display panel. Is there a problem?
A. No. This is a normal condition for a timer recording in progress.

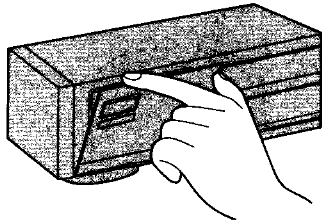
Q. Can I program the timer while I'm watching a tape or a TV broadcast?
A. You won't see the picture as it is replaced by the on-screen menu, but the audio from the program or tape you're viewing can be heard.

ATTENTION:
This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the recorder off and unplug the mains power cord. Then plug it in again and turn the recorder on. Take out the cassette. After checking the cassette, operate the unit as usual.

FRONT VIEW



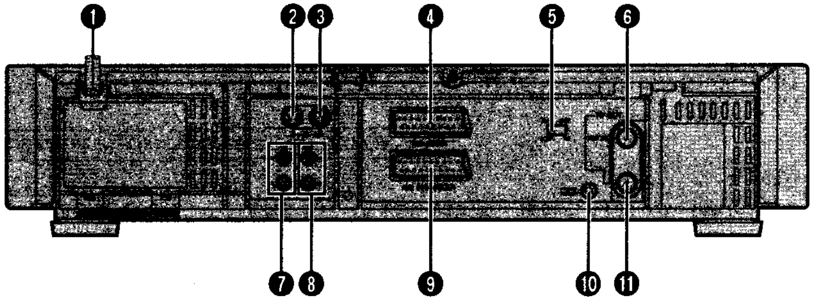
Open the lid to access covered connectors and buttons.



① STANDBY/ON ⏻/I Button ☞ pg. 6
② TIMER Button ☞ pg. 29, 31
③ SPATIALIZER Button ☞ pg. 18
④ IN/OUT Button ☞ pg. 43
⑤ START Button ☞ pg. 43
⑥ A. DUB [Audio Dubbing] Button ☞ pg. 39
⑦ INSERT Button ☞ pg. 41
⑧ Cassette Loading Slot
⑨ STOP/EJECT Button ☞ pg. 14
⑩ PLAY Button ☞ pg. 14
⑪ TIME SCAN Indicator ☞ pg. 20
⑫ TIME SCAN SHUTTLE Ring ☞ pg. 20
⑬ TV PROG Dial ☞ pg. 23
JOG Dial ☞ pg. 15
⑭ Headphone Connector*
⑮ Headphone Volume control*
⑯ VIDEO/AUDIO Input Connectors ☞ pg. 38
⑰ Hi-Fi Audio Recording Level Control (☞ pg. 26)
⑱ AV/S SELECT Button ☞ pg. 35
⑲ J Terminal [JLIP (Joint Level Interface Protocol) Connector] ☞ pg. 44
⑳ PAL/MESECAM Switch ☞ pg. 16
㉑ AUTO SP/LP TIMER Button ☞ pg. 33
㉒ AUTO SP/LP TIMER Indicator ☞ pg. 33
㉓ Display Panel ☞ pg. 61
㉔ Infrared Beam Receiving Window
㉕ RECORD Button ☞ pg. 23
㉖ SP/LP Button ☞ pg. 23
㉗ PAUSE Button ☞ pg. 15
㉘ Rewind [REW] Button ☞ pg. 14
㉙ Fast Forward [FF] Button ☞ pg. 14

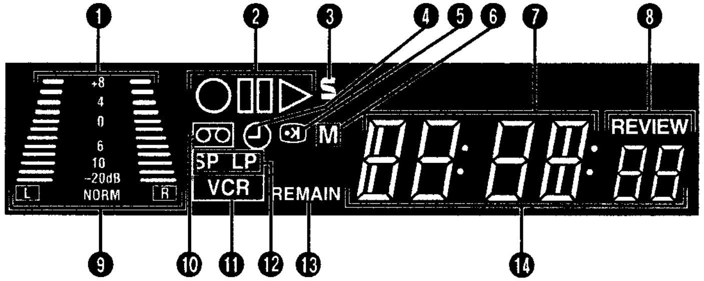
* It is possible to listen to the audio using headphones. Adjust the volume level using the Headphone Volume Control.

REAR VIEW



① Mains Power Cord ☞ pg. 3
② S-Video IN Connector ☞ pg. 36
③ S-Video OUT Connector ☞ pg. 4
④ AV1 IN/OUT Connector ☞ pg. 3, 36
⑤ AV1 OUT Switch ☞ pg. 3
⑥ ANT. IN Connector ☞ pg. 3
⑦ AUDIO IN (L/R) Connectors ☞ pg. 46
⑧ AUDIO OUT (L/R) Connectors ☞ pg. 46
⑨ AV2 IN/DECODER Connector ☞ pg. 36, 45
⑩ Remote PAUSE Connector ☞ pg. 38
R.A.EDIT Connector ☞ pg. 42
⑪ RF OUT Connector ☞ pg. 3

DISPLAY PANEL

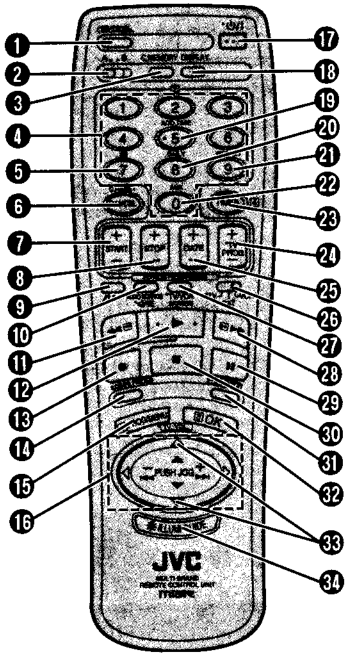


① Audio Level Indicator ☞ pg. 26
② Symbolic Mode Indicators

PLAY: FF/REW VARIABLE SHUTTLE SEARCH:	▷	STILL: SLOW:	▯▯▷
		RECORD:	○
		RECORD PAUSE:	○▯▯
AUDIO DUBBING:			○ ▷
AUDIO DUBBING PAUSE:			○▯▯▷
INSERT:			○ ▷
INSERT PAUSE:			○▯▯▷
AUDIO DUBBING INSERT:			○ ▷
AUDIO DUBBING INSERT PAUSE:			○▯▯▷

③ S-VHS Indicator ☞ pg. 25
④ "Timer" Indicator ☞ pg. 29, 31
⑤ PDC/VPS Indicator ☞ pg. 33
⑥ Counter Memory Indicator ☞ pg. 19
⑦ Channel*/Mode Display ☞ pg. 23
*Channel position 1 will be displayed as "CH 1".
Clock Display ☞ pg. 7, 55
⑧ Instant REVIEW Indicator ☞ pg. 17
⑨ Audio Mode Indicator ☞ pg. 18
⑩ "Cassette Loaded" Mark
⑪ VCR Indicator ☞ pg. 24
⑫ Tape Speed Indicators ☞ pg. 23
⑬ Tape Remaining Time Indicator ☞ pg. 24
⑭ Counter/Remain Display ☞ pg. 24

REMOTE CONTROL

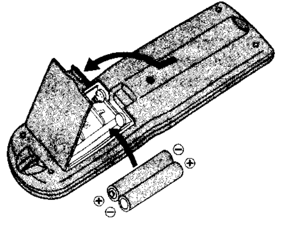


① REVIEW Button ☞ pg. 17
② A/B Code Switch ☞ pg. 19
③ C. MEMORY Button ☞ pg. 19
④ NUMBER Keys ☞ pg. 23, 28
⑤ ⓟ (PDC/VPS) Button ☞ pg. 29, 31
⑥ CANCEL Button ☞ pg. 13
  C. RESET Button ☞ pg. 24
⑦ START +/– Button ☞ pg. 30
⑧ STOP +/– Button ☞ pg. 30
⑨ SP/LP Button ☞ pg. 23
  Auto Tracking Button ☞ pg. 16
  Digit Entry Button ☞ pg. 48
⑩ AUDIO MONITOR Button ☞ pg. 18
  🔈/🔇 (TV Mute) Button ☞ pg. 48
⑪ Rewind [REW] Button ☞ pg. 14
⑫ Play Button ☞ pg. 14
⑬ Record Button ☞ pg. 23
⑭ SCENE FINDER Button ☞ pg. 19
⑮ PROG/MENU Button ☞ pg. 9, 28
⑯ PUSH JOG △▽ ◁▷ Button ☞ pg. 9
  PUSH JOG ◁▷ Button ☞ pg. 15, 17, 48
⑰ STANDBY/ON ⏻/I Button ☞ pg. 6
⑱ DISPLAY Button ☞ pg. 24
⑲ ADD TIME Button ☞ pg. 29
⑳ DAILY Button ☞ pg. 29, 31
㉑ WEEKLY Button ☞ pg. 29, 31
㉒ AUX Button ☞ pg. 35
㉓ TIMER Button ☞ pg. 29, 31
㉔ TV PROG +/– Button ☞ pg. 23
㉕ DATE +/– Button ☞ pg. 31
㉖ TV/SAT/VCR Switch ☞ pg. 48, 49
㉗ TV/VCR Button ☞ pg. 24, 48
㉘ Fast Forward [FF] Button ☞ pg. 14
㉙ Pause Button ☞ pg. 15
㉚ Stop Button ☞ pg. 14
㉛ PROG CHECK Button ☞ pg. 32
㉜ OK Button ☞ pg. 9
㉝ TV VOL △▽ Button ☞ pg. 48
㉞ ILLUMI GUIDE Button ☞ pg. 28

Buttons with a small dot on the left side of the name can also be used to operate your TV with the **TV/SAT/VCR** switch set to "TV". ☞ pg. 48

Installing Batteries

1. Open the battery compartment cover.
2. Insert 2 "R6"-size batteries (provided) in the correct directions.
3. Replace the cover.



How To Use

The remote control can operate most of your video recorder's functions, as well as basic functions of TV sets and satellite tuners of JVC and other brands. ☞ pg. 48, 49.

- Point the remote control toward the sensor window.
- The maximum operating distance of the remote control is about 8 m.

NOTE:

If the remote control doesn't work properly, remove its batteries, wait a short time and then try again.

Auto Set Up – referring to the display panel

The Auto Set Up function sets the tuner channels, clock and Guide Program numbers automatically.

BEFORE YOU START PLEASE MAKE SURE THAT:

■ The TV aerial cable is connected to the ANT.IN jack on the rear panel of the video recorder.
■ The video recorder's mains power cord is connected to a mains outlet.
■ The video recorder is turned off.
■ Load batteries into the remote control.

1 Press ⏻/I (recorder/remote).

2 Press **PUSH JOG** △▽ (remote) to select the international telephone country code.

(Ex.) DEUTSCHLAND is selected.

- If you have selected a country code other than 32 (BELGIUM) or 41 (SUISSE), go to step 3.

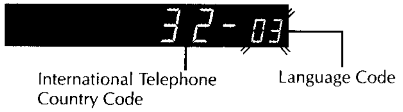
International Telephone Country Code

SUOMI	: 358	SUISSE	: 41
PORTUGAL	: 351	ITALIA	: 39
DEUTSCHLAND	: 49	ESPAÑA	: 34
NORGE	: 47	BELGIUM	: 32
SVERIGE	: 46	NEDERLAND	: 31
DANMARK	: 45	GREECE	: 30
ÖSTERREICH	: 43	OTHERS	: - -

* Depending on the model, the selectable codes may be limited.

- If you have selected 32 (BELGIUM) or 41 (SUISSE), press **OK** (remote) and select the language code by pressing **PUSH JOG** △▽ (remote), then go to step 3.

(Ex.) FRANCAIS is selected for BELGIUM



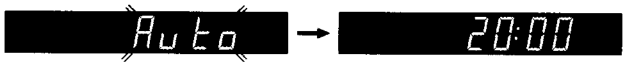
Language Code for the HR-S9400E

ENGLISH	: 01	ITALIANO	: 04
DEUTSCH	: 02	NEDERLANDS	: 05
FRANCAIS	: 03		

Language Code for the HR-S9400EH

ENGLISH	: 01	CASTELLANO	: 04
DEUTSCH	: 02	NEDERLANDS	: 05
FRANCAIS	: 03		

3 Press **OK** (remote). Do NOT press any button on the video recorder or remote control until the current time appears.



During Auto Set Up   Auto Set Up completed

- If "CH1" or "– –:– –" appears on the display panel, see page 7 of the instructions.

**Once you have performed Auto Set Up, even if the recorder's memory backup has expired, the recorder will not perform Auto Set Up again.*

FOR MORE INFORMATION SEE INSTRUCTIONS/P6

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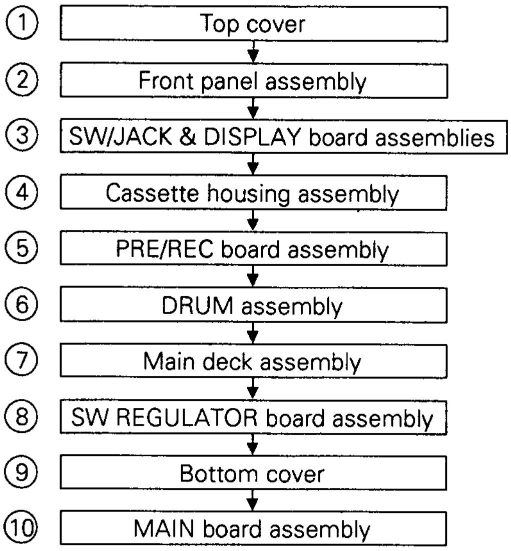
E/EH Printed in Japan
0697HOV*UN*VP

SECTION 1
DISASSEMBLY

1.1 DISASSEMBLY FLOW CHART

This flowchart lists the disassembling steps for the cabinet parts and P.C. boards in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally laid.



1.2 HOW TO READ THE DISASSEMBLY AND ASSEMBLY

STEP /LOC NO.	PART NAME	FIG. NO.	POINT	NOTE
①	TOP COVER	D1	4(S1), (S2), SIDE PANEL (L),(R)	
②	FRONT PANEL ASSEMBLY	D2	8(L1),*JOG/SHUTTLE *CN802	<NOTE1>
③	SW/JACK & DISPLAY BOARD ASSEMBLIES	D3	13(L2),*CN1201, *CN1204	<NOTE2>
④	CASSETTE HOUSING ASSEMBLY	D4	2(S3), 2(S4)	<NOTE3>
⑤	PRE/REC BOARD ASSEMBLY	D5	2(S5), *CN2701, *CN2702, *CN2703 SHIELD CASE	
↑ (1)	↑ (2)	↑ (3)	↑ (4)	↑ (5)

(1) Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) NO. of parts Figures.
(2) Part name to be removed or installed.
(3) Fig.No. showing procedure or part location
(4) Indentification of part to be removed,unhooked,unlocked, released,unpluged,unclamped or unsoldered. P = Spring, W = Washer, S = Screw, L = Locking tab, * = Unhook,unlock, release,unplug or unsolder.
(5) Adjustment information for installation

1.3 DISASSEMBLY/ASSEMBLY METHOD

STEP /LOC NO.	PART NAME	FIG. NO.	POINT	NOTE
①	TOP COVER	D1	4(S1), (S2), SIDE PANEL (L),(R)	
②	FRONT PANEL ASSEMBLY	D2	8(L1),*JOG/SHUTTLE *CN802	<NOTE1>
③	SW/JACK & DISPLAY BOARD ASSEMBLIES	D3	13(L2),*CN1201, *CN1204	<NOTE2>
④	CASSETTE HOUSING ASSEMBLY	D4	2(S3), 2(S4)	<NOTE3>
⑤	PRE/REC BOARD ASSEMBLY	D5	2(S5), *CN2701, *CN2702, *CN2703 SHIELD CASE	
⑥	DRUM ASSEMBLY	D6	3(S6), WR1, 4(L3), (L4), INERTIA PLATE, PIN	<NOTE4>
⑦	MAIN DECK ASSEMBLY	D7	2(S7), WR2 WR3,2(L5),*CN703	<NOTE5>
⑧	SW REGULATOR BOADR ASSEMBLY	D8	3(S8),*CN1,*CN2	
⑨	BOTTOM COVER	D9 D10	4(L6), 7(L7), (S9), 2(S10), FOOT ASSEMBLY FOOT (2)	<NOTE6>
⑩	MAIN BOARD ASSEMBLY	D11	2(S11)	

<NOTE1>
When reattaching the front panel assembly, make sure that the door opener (ⓐ) of the cassette housing assembly is lowered in position prior to the reinstallation.

<NOTE2>
- When plugging the connector in, check that the flat wire is inserted properly and fully.
- When remove the DISPLAY & SW/JACK board assemblies, remove the cassette housing assembly (refer to Fig. D4), REC SAFETY board assembly and CASSETTE SWITCH board assembly first, and then remove the DISPLAY & SW/JACK board assemblies.

<NOTE3>
When reattaching the cassette housing assembly, pay careful attention to the switch lever not to make it touch the REC switch knob of the REC SAFETY board assembly from the upside.
(If the REC switch knob of the REC SAFETY board assembly is damaged, cassette loading is impossible.)

<NOTE4>
When plugging the connector in, check that the flat wire is inserted properly and fully.

<NOTE5>
- When removing the Main deck assembly only, unhook the two spacers connecting it with the Main board assembly with pliers from the back side of the Main board assembly first, and then remove the Main deck assembly.
- When reattaching the Main deck assembly to the Main board assembly, make sure to set the spacers into the retaining slots respectively.

<NOTE6>
Remove the 4 tabs (L6) of the top side of chassis (refer to Fig. D9) first. Remove the 2 feet assemblies and 2 feet (2), and remove 1 screw (S9), 2 screws (S10) and 7 tabs (L7) of the bottom side of chassis (refer to Fig. D10). Then remove the bottom cover.

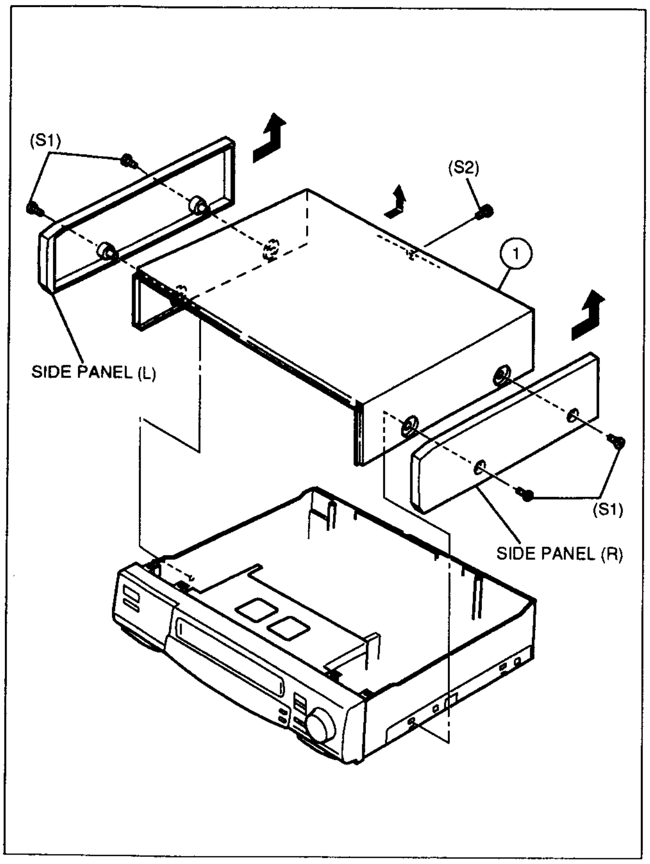

(S1)
(S2)
1
SIDE PANEL (L)
(S1)
SIDE PANEL (R)

Fig. D1

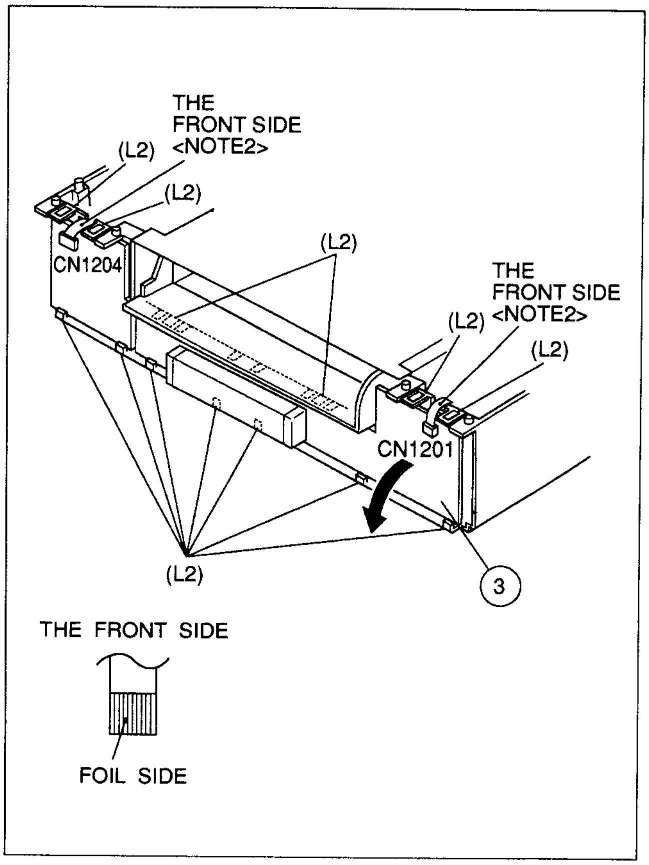

THE FRONT SIDE <NOTE2>
(L2)
(L2)
CN1204
(L2)
THE FRONT SIDE <NOTE2>
(L2)
(L2)
CN1201
(L2)
3
THE FRONT SIDE
FOIL SIDE

Fig. D3

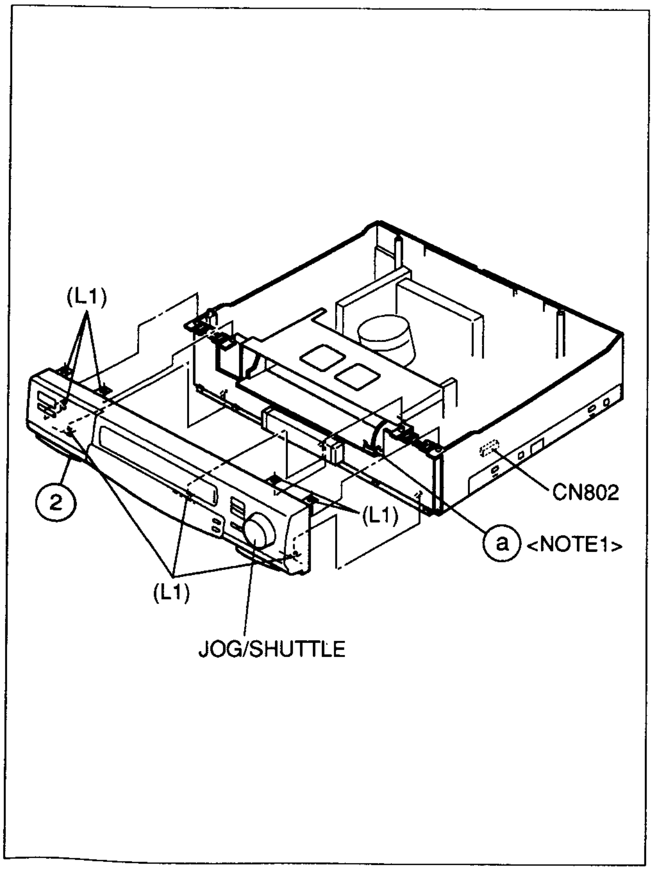

(L1)
2
(L1)
(L1)
JOG/SHUTTLE
CN802
a <NOTE1>

Fig. D2

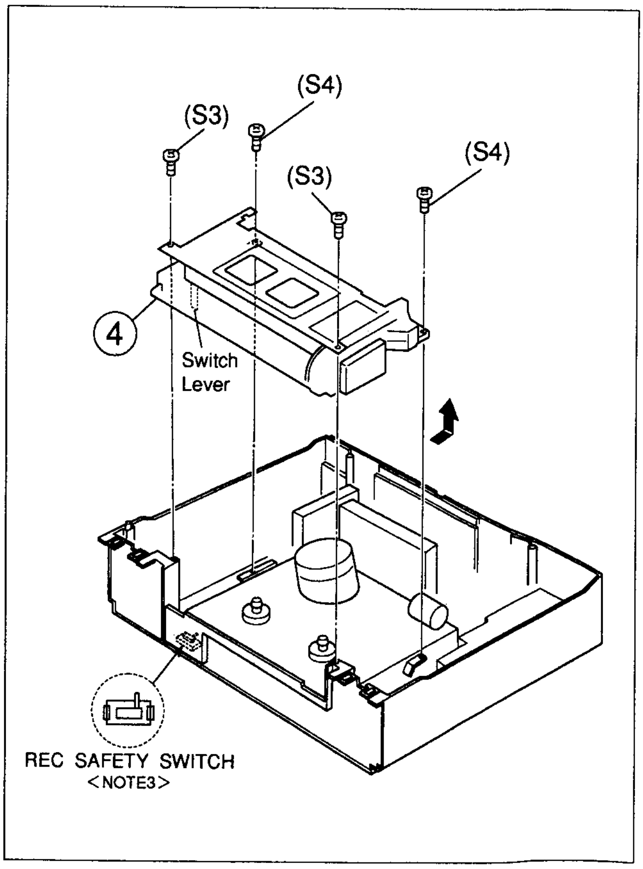

(S4)
(S3)
(S4)
(S3)
4
Switch Lever
REC SAFETY SWITCH
<NOTE3>

Fig. D4

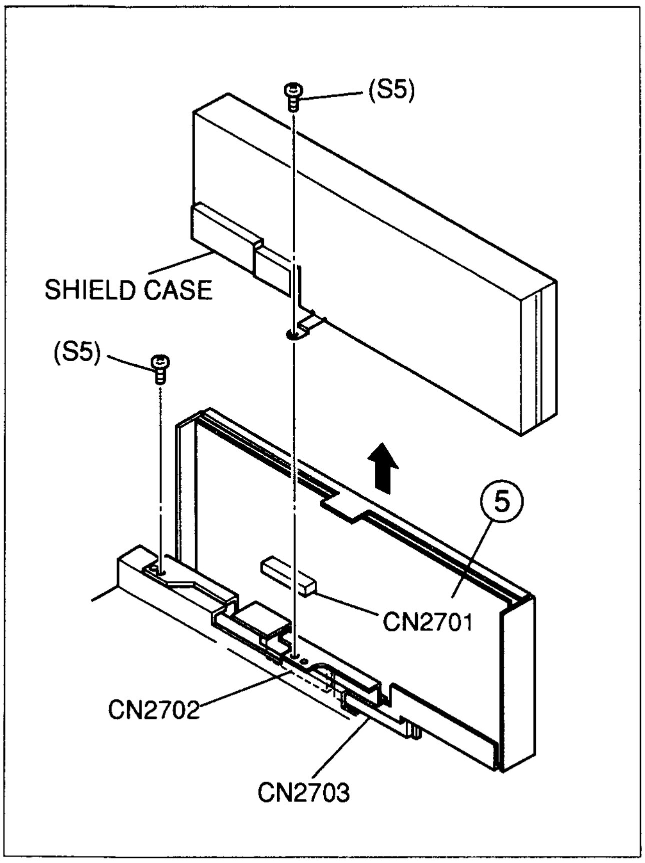

(S5)
SHIELD CASE
(S5)
5
CN2701
CN2702
CN2703

Fig. D5

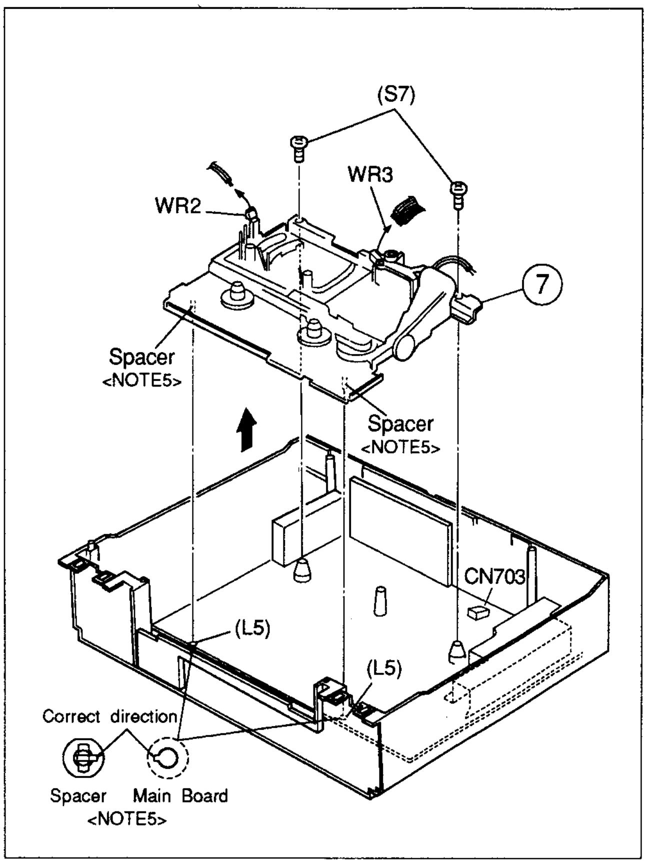

(S7)
WR3
WR2
7
Spacer
<NOTE5>
Spacer
<NOTE5>
CN703
(L5)
(L5)
Correct direction
Spacer
<NOTE5>
Main Board

Fig. D7

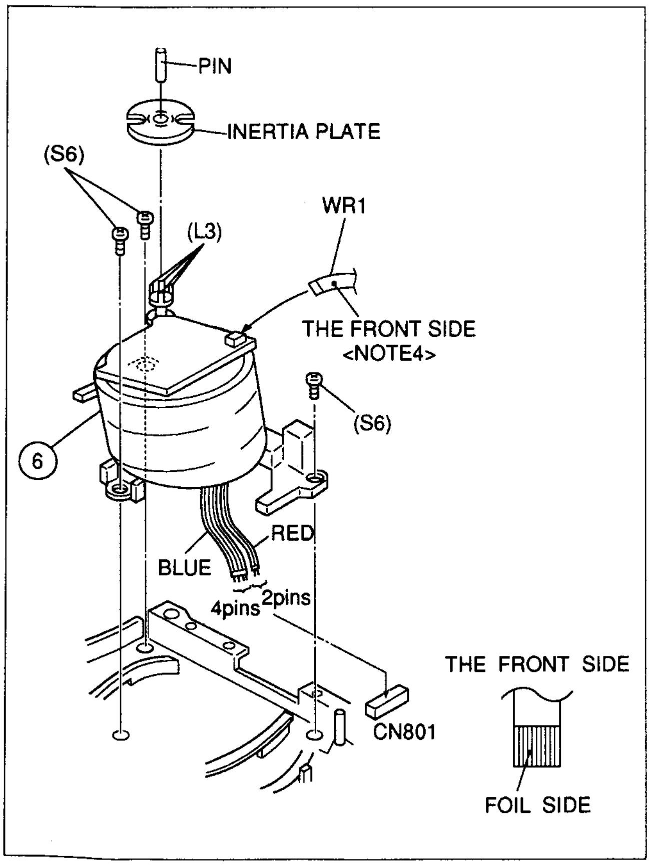

PIN
INERTIA PLATE
(S6)
(L3)
WR1
THE FRONT SIDE
<NOTE4>
(S6)
6
RED
BLUE
4pins
2pins
CN801
THE FRONT SIDE
FOIL SIDE

Fig. D6

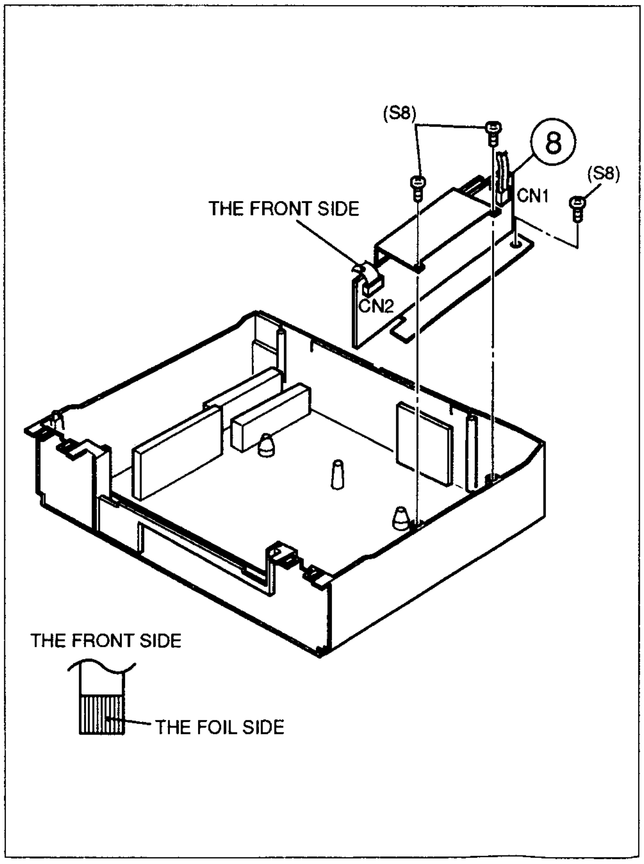

(S8)
8
(S8)
CN1
THE FRONT SIDE
CN2
THE FRONT SIDE
THE FOIL SIDE

Fig. D8

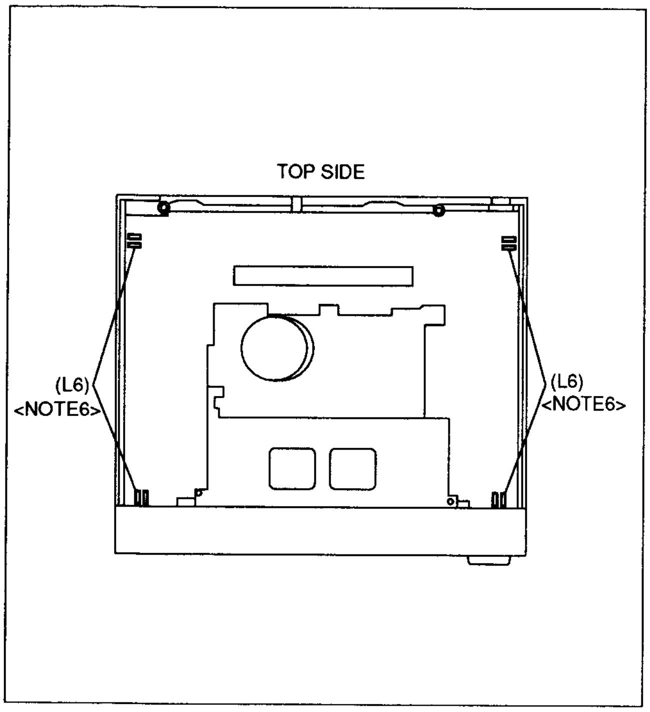

TOP SIDE
(L6)
<NOTE6>
(L6)
<NOTE6>

Fig. D9

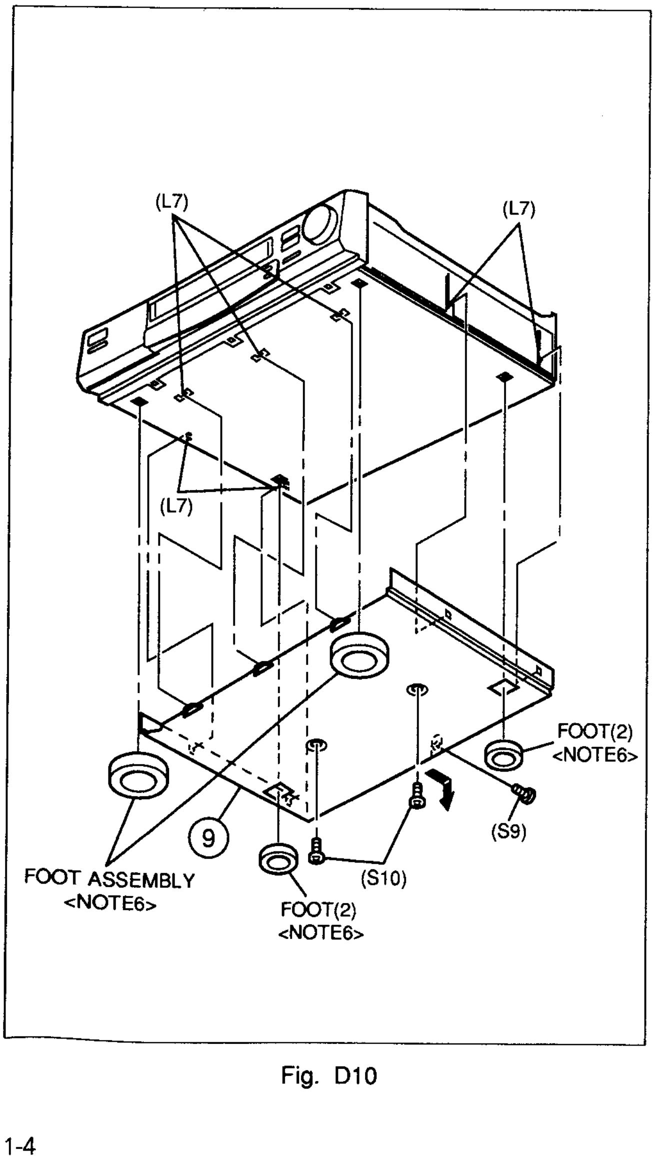

(L7)
(L7)
(L7)
FOOT(2)
<NOTE6>
(S9)
9
(S10)
FOOT ASSEMBLY
<NOTE6>
FOOT(2)
<NOTE6>

Fig. D10

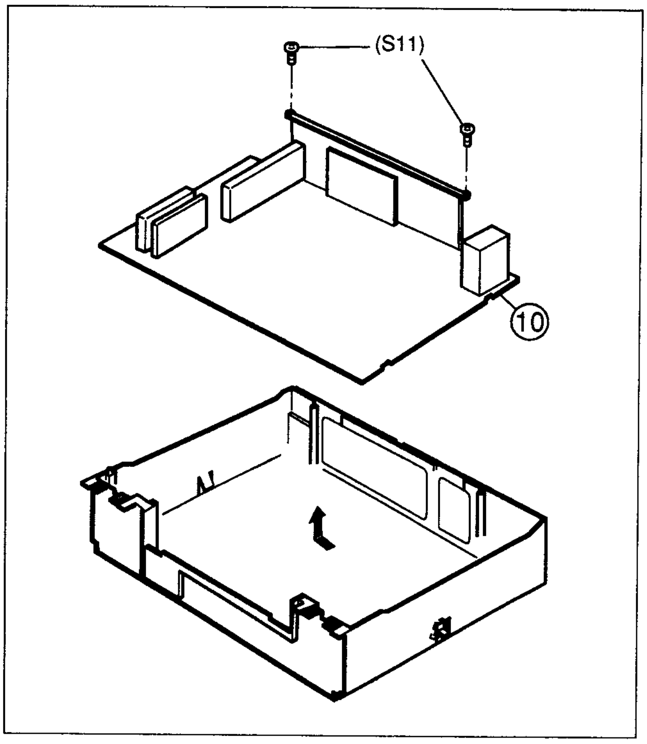


Fig. D11

1.4 CASSETTE HOUSING INSTALLATION

NOTE: *Observe the mechanical phase and position (see figure) when installing the cassette housing assembly. If these are incorrect, the system will not operate properly even when tape is inserted.*

1. Check that the hole of the control cam are aligned to the deck hole. If necessary, turn the loading motor belt by hand to adjust the position.

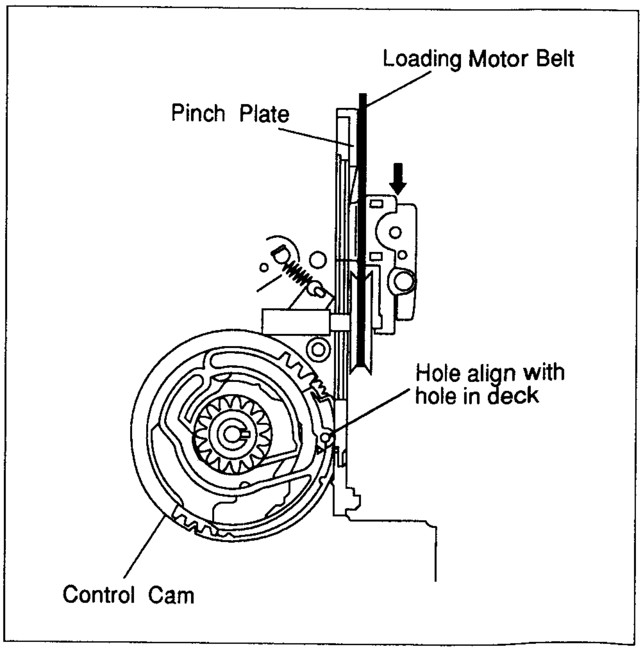

Loading Motor Belt
Pinch Plate
Hole align with
hole in deck
Control Cam

Fig. 1-4-1

1.5 SERVICE POSITION

1.5.1 How to take out the Mechanism and Main board assemblies.

(1) Remove the Top cover, Front panel assembly, CN1204 of the SW/JACK board assembly and CN1201 of the DISPLAY board assembly.

(2) Take out 7 screws Ⓐ, 2 screws Ⓑ and 1 screw Ⓒ as shown in Fig.1-5-1.

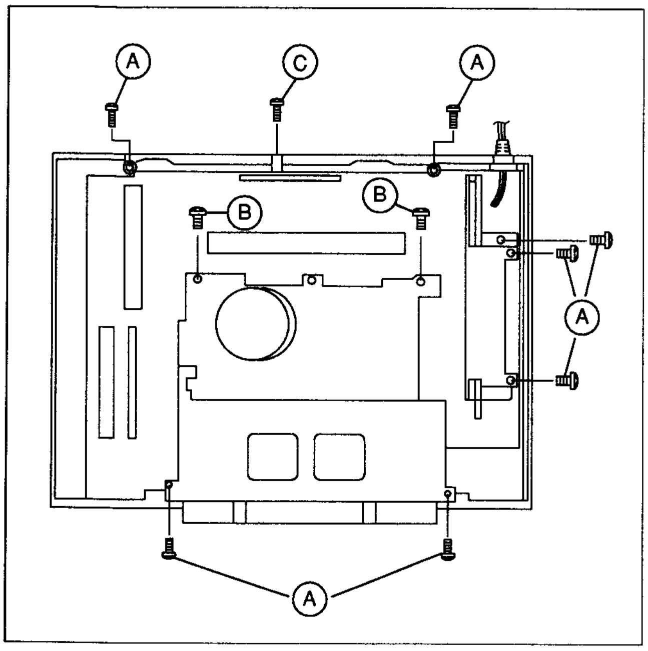


Fig. 1-5-1

(3) Remove the bottom cover. (Refer to Fig. D9 and Fig. D10)

(4) Remove the Mechanism assembly (including Cassette housing) and Main board assembly together with SW REGULATOR board assembly, out of the chassis as shown in Fig. 1-5-2.

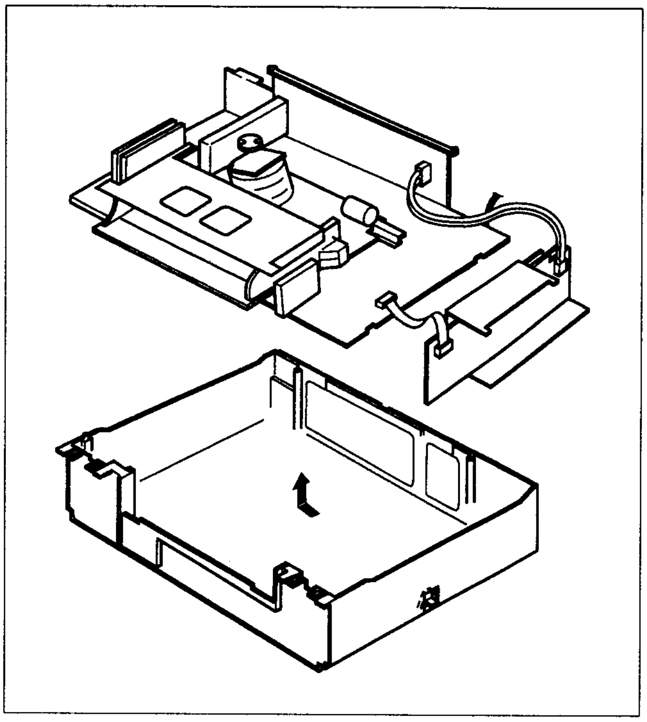


Fig. 1-5-2

(6) Turn over the Mechanism assembly and Main board assembly then connect CN1201 of the DISPLAY board assembly.

(7) Carry out checks & repairs as necessary as shown in Fig.1-5-3.

Note: *When input the AUDIO/VIDEO signal from connector, connect CN1204 of the SW/JACK board assembly.*

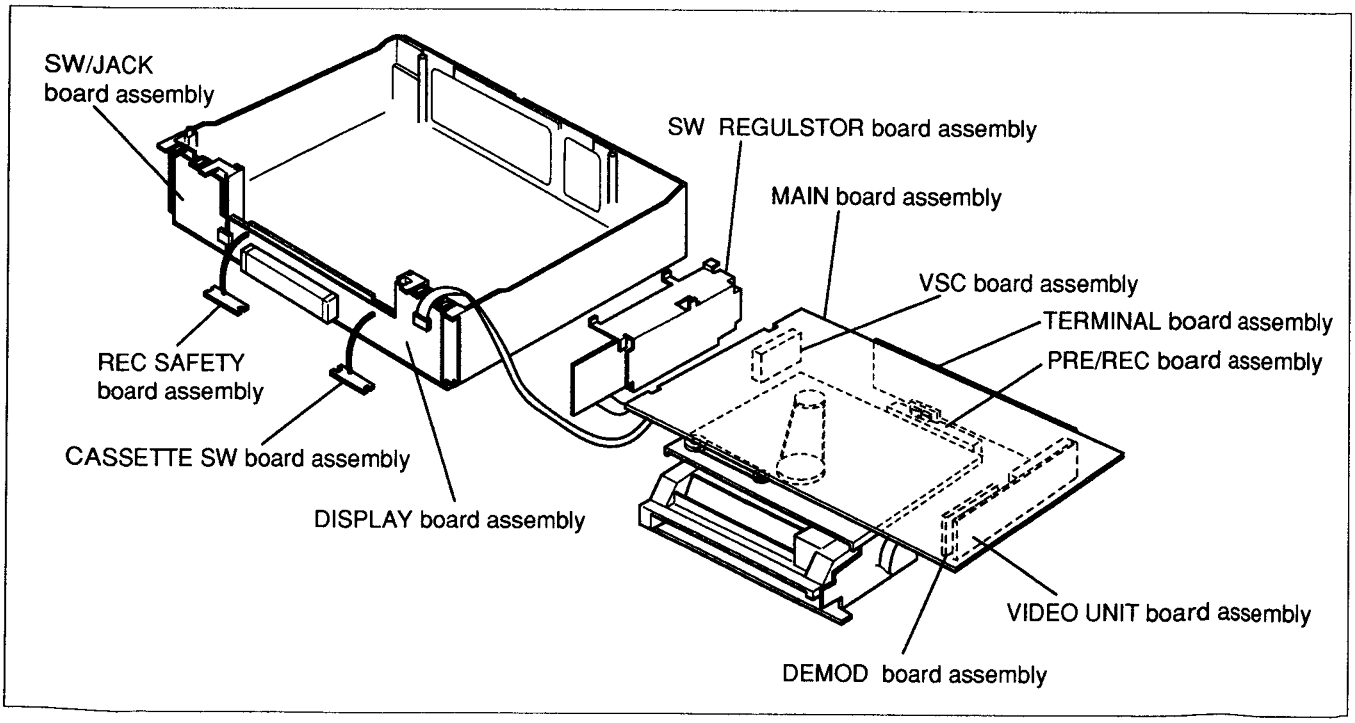

SW/JACK board assembly
SW REGULSTOR board assembly
MAIN board assembly
VSC board assembly
TERMINAL board assembly
PRE/REC board assembly
REC SAFETY board assembly
CASSETTE SW board assembly
DISPLAY board assembly
VIDEO UNIT board assembly
DEMOD board assembly

Fig. 1-5-3

1.5.2 Cautions on cassette loading when mechanism is in service position

The REC SAFETY board assembly of this set serves both for detecting the safety tab (erasure prevention tab) of a cassette and detecting a cassette loaded. Therefore, cassette loading in the condition that the mechanism is disassembled from the set needs manual operation of the switches of the REC SAFETY board assembly and the CASSETTE SWITCH board assembly.

1.5.3 Cassette loading and ejecting procedures when mechanism is in service position

(1) Insert a cassette tape halfway into the cassette housing assembly.

(2) Press the switch of the REC SAFETY board assembly to turn on.

(3) When the cassette loading begins and the cassette goes down to the bottom, immediately press the switch of the REC SAFETY board assembly to turn off and hold the status that the switch of the CASSETTE SWITCH board assembly is turned on. (Fix the switch with adhesive tape or put a screwdriver, etc. on it to leave the switch in the ON status.)

(4) In this status, desired operations (recording, playback, fast forward, rewind, etc.) can be performed.

Note: *When the mechanism is in the service position, the safety tab of cassette tape is not detected and recording on cassette tapes without safety tab is possible. Therefore, carefully choose a cassette tape for operation in this mode so as to avoid using cassette tapes of important recording.*

(5) For ejecting the cassette in this status, do it in the reverse order of cassette loading mentioned above.

Note: *If the manual operation REC SAFETY switch timing is incorrect, the cassette may be completely or partially ejected, and the cassette is often ejected incompletely. In such a case, it is possible to take out the cassette by hand.*

If it is desired to load a cassette again after the cassette is ejected in the above procedure, make sure to set the tray of the cassette housing assembly in the frontmost position prior to loading the cassette once again.

1.5.4 Opening on the chassis.

The chassis assembly has openings for easy access to the checkpoints and connector pins as shown in Fig.1-5-4.

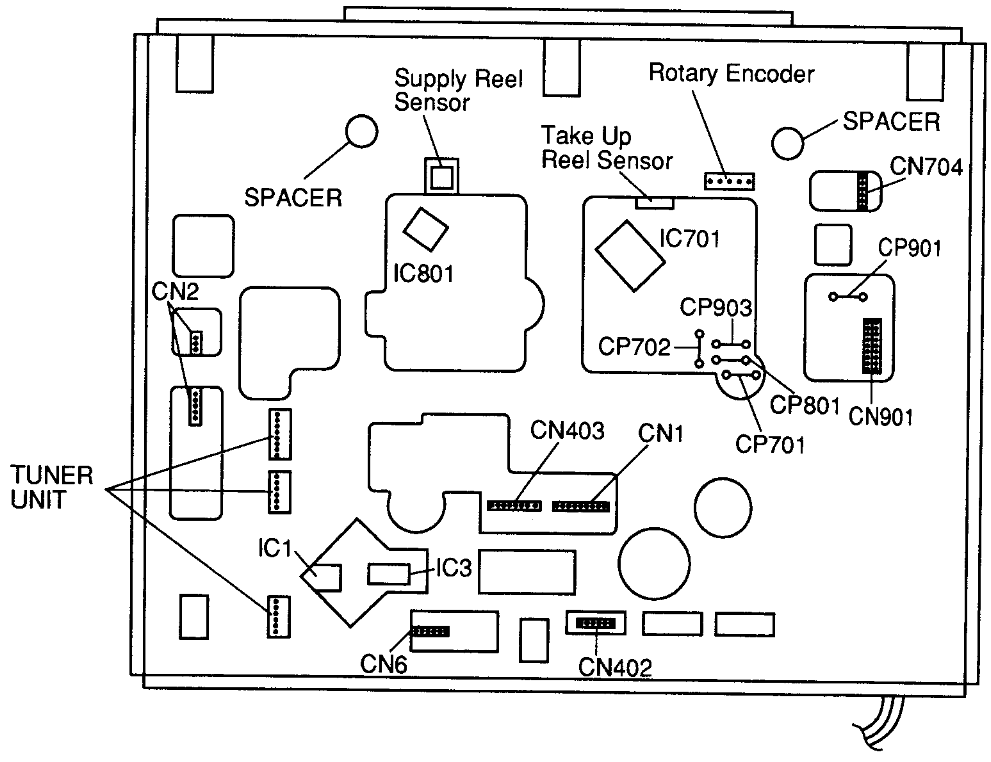


Fig. 1-5-4

1.6 MECHANISM SERVICE MODE

This model has a unique function to enter the mechanism into every operation mode without loading of any cassette tape. This function is called the "MECHANISM SERVICE MODE".

1.6.1 How to set the "MECHANISM SERVICE MODE"

(1) Disconnect VCR from AC.
(2) Remove the Top cover, Front panel assembly and cassette housing assembly. (See Page 1-2, 1-3)
(3) Connect TP1202 (GND) and TP1201 (TEST) on the DISPLAY board assembly with a jump wire.
(4) Connect VCR to AC.
(5) Press the POWER button.
(6) Select the desired operation modes with the operation buttons or remote controller.

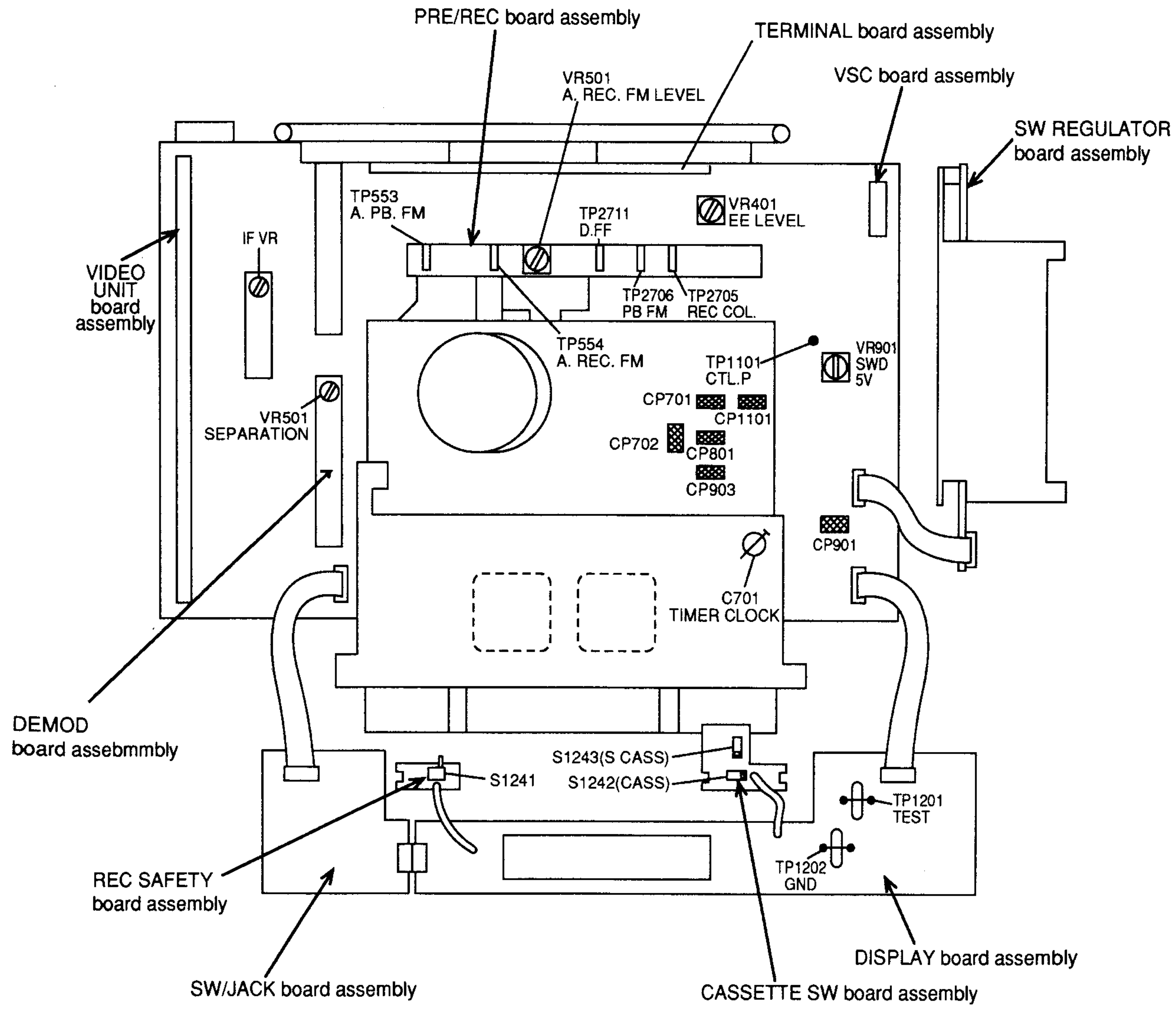

PRE/REC board assembly
TERMINAL board assembly
VR501
A. REC. FM LEVEL
VSC board assembly
SW REGULATOR board assembly
TP553
A. PB. FM
TP2711
D.FF
VR401
EE LEVEL
IF VR
VIDEO UNIT board assembly
TP2706
PB FM
TP2705
REC COL.
TP554
A. REC. FM
TP1101
CTL.P
VR901
SWD
5V
CP701
CP1101
VR501
SEPARATION
CP702
CP801
CP903
CP901
C701
TIMER CLOCK
DEMOD board assebmmbly
S1243(S CASS)
S1241
S1242(CASS)
TP1201
TEST
REC SAFETY board assembly
TP1202
GND
DISPLAY board assembly
SW/JACK board assembly
CASSETTE SW board assembly

Fig. 1-6-1

1.7 EMERGENCY DISPLAY FUNCTION

This product has the function to store the last two previous emergency faults which can be displayed in the FDP when servicing.

1.7.1 How to display record of an emergency faults

(1) Press "N" button of the presetting unit more than 2 seconds. and the two previous emergency faults are shown in the FDP.

(2) Press "N" button of the presetting unit again when return to the normal mode.

[Example] E : 01 : 03

01 ← Emergency fault of the last time

03 ← Emergency fault before last

[Example] E : — — : — — ←No record of emergency

1.7.3 How to clear emergency record

Press the COUNTER RESET button on the remote controller in the emergency record display mode,and the record of the emergency fault(s) is cleared.

1.7.2 Detail of emergency faults

FDP	Symptom	Detect mode	Resulting mode
E : 01	Loading motor rotates for more than 8 Sec without shift to next mode.	Loading	POWER OFF
E : 02	Loading motor rotates for more than 8 Sec without shift to next mode.	Unloading	POWER OFF
E : 03	SUP or TU REEL FG input is absent (for more than 4 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	STOP → POWER OFF
E : 04	DRUM FF input is absent(for more than 3 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	STOP
E : 06	CAPSTAN FG input is absent(for more than 1 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	STOP → POWER OFF
E : 07	No SWD5V/12V	POWER ON	POWER OFF
E : 08	Initialized action of DD (Dynamic Drum) is not complete for less than 4 seconds.	Connect VCR to AC	STOP
E : 09	DD drive motor is not rorate for more than 2.5 seconds.	on TIME SCAN	STOP

Table 1-7-1 EMERGENCY FAULTS

SECTION 2
MECHANISM ADJUSTMENT

PMC 0013A-E or PMC 0013A-M is used in this model.
For the MECHANISM ADJUSTMENT and PARTS LIST, please refer to the MECHANISM ASSEMBLY of the Service Manual (No. 82595).

SECTION 3
ELECTRICAL ADJUSTMENT

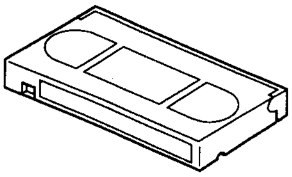
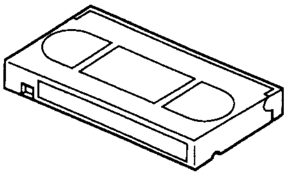
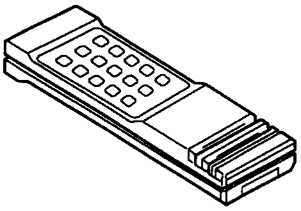
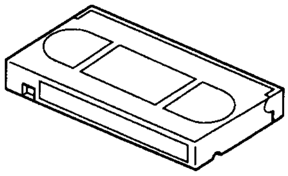
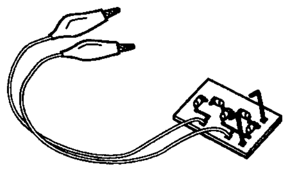
3.1 PRECAUTION

Electrical adjustment are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also do not attempt these adjustments unless the proper equipments is available.

3.1.1 Required test equipment

① Colour television or monitor
② Oscilloscope: wide-band,dual-trace,triggered delayed sweep
③ Frequency counter
④ Digital voltmeter
⑤ Signal generator: RF/IF sweep/marker
⑥ Signal generator: PAL colour bar, stairstep
⑦ Recording tape
⑧ Numeric-key remote controller(provided)

3.1.2 Required adjustment tools

Alignment tape (SP,stairstep) MHPE	Alignment tape (SP,colour bar) MHVE-2
	
Presetting unit PTU94008	Alignment tape (S-VHS SP/LP colour bar) MH-2H
	
LPF PTU93006	
	

3.1.3 Colour bar signal,colour bar pattern

- Colour bar signal

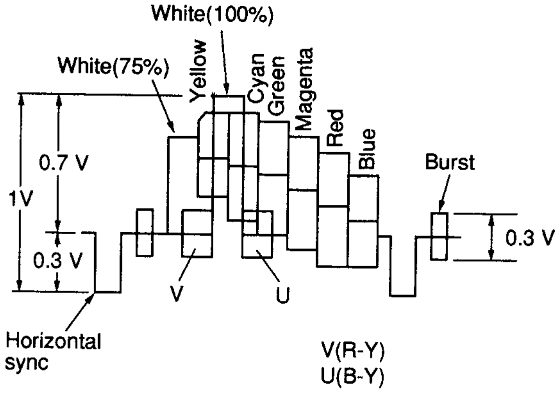


Fig.3-1-1 Colour bar signal waveform

- Colour bar pattern

(75%) →

White	Yellow	Cyan	Green	Magenta	Red	Blue
V	U	White 100%			Black	

Fig.3-1-2 Colour bar pattern

3.2 SWITCHING REGULATOR CIRCUIT

Note: • *Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.*

3.2.1 5V DC output voltage

Signal	•AUX •TUNER
Mode	•REC : SP
Equipment	•Digital voltmeter
Measurement point	•CN2-pins 27 or 28 (SWD 5V)
Adjustment part	•VR901 (SWD 5V)
Specification	•5.10 ± 0.10V DC

(1) Connect a digital voltmeter to CN2-pins 27 or 28 and GND.
(2) Adjust VR901 for 5.10 ± 0.10V DC.

3.3 SERVO CIRCUIT

Notes: • *Unless otherwise specified,all measurement point and adjustment parts are located on the MAIN BOARD.*
- *Set VCR to the mode A by remote controller.*
- *Use only buttons "E" and "F", depressing other buttons during adjustment may cause adjustment errors.*

3.3.1 PB switching point

Signal	•Alignment tape [MHPE],Stairstep
Mode	•PB,Automatic tracking OFF
Equipment	•Oscilloscope
Measurement point	•TP3(V.OUT) [TERMINAL board]
Trigger slope (-)	•TP2711(DRUM FF), [PRE/REC BOARD]
Adjustment tool	•Presetting unit [PTU94008]
Specification	•7.5 ± 0.5H

(1) Connect an oscilloscope to TP3 and external trigger from TP2711 (negative slope).
(2) Playback the stairstep signal of the alignment tape.
(3) Set the tracking control to the centre position by pressing the /// button of the remote controller.
(4) Adjust by pressing "E" or "F" buttons of presetting unit for position the trigger point 7.5 ± 0.5 H from V.sync.
(5) Depress the STOP button.

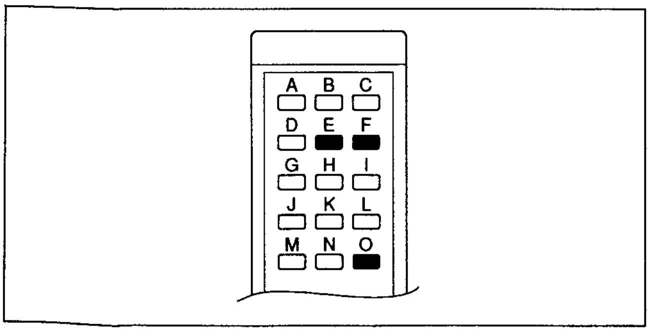


Fig.3-3-1 Presetting unit

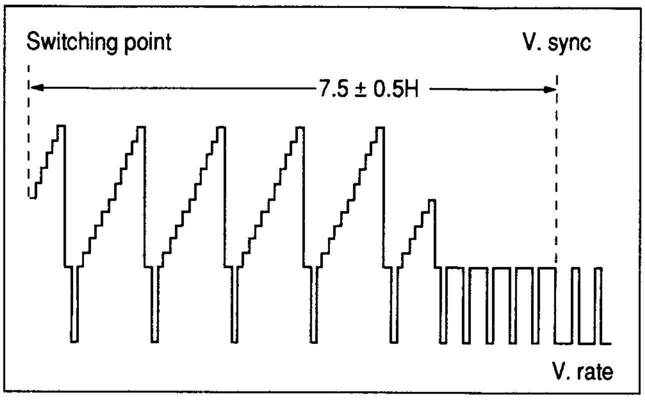


Fig.3-3-2 PB switching point

Alternate method

(1) Playback the stairstep signal of the alignment tape.
(2) Press the "O" button of the presetting unit.
(3) Confirm that VCR mode becomes STOP mode.

3.3.2 Slow tracking preset

Signal	•Tuner or colour bar
Mode	•SP/LP, REC → PB(SLOW)
Equipment	•TV-Monitor
Adjustment tool	•Presetting unit [PTU94008]
Specification	•Minimum noise

Notes: • *Set VCR to the mode A by remote controller.*
- *Use only buttons "B" and "C", depressing other buttons during adjustment may cause adjustment errors.*

(1) Record a colour bar signal in the SP mode.
(2) Playback recorded signal on the FWD slow mode.
(3) Observe the display on the TV monitor and adjust for optimum noise condition (best tracking) by depressing "B " or "C " buttons of the presetting unit.
(4) Depress the STOP button.
(5) Confirm that the bar noise is not visible on the TV monitor in the slow mode.
(6) Repeat steps (2) to (5) in REV slow mode.
(7) Repeat steps (1) to (6) in LP mode.

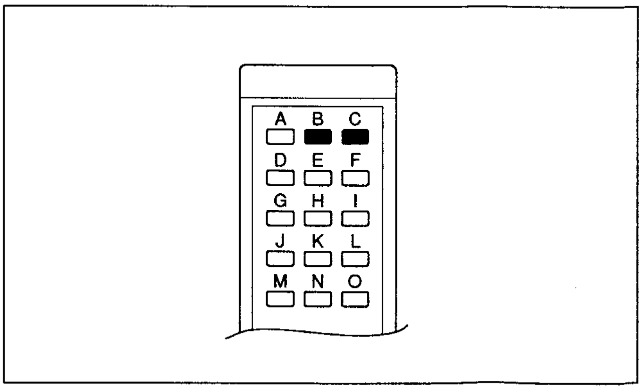


Fig.3-3-3 Presetting unit

3.3.3 Dynamic drum preset

Signal	• Alignment tape [MHPE-L], Stairstep
Mode	• Automatic tracking OFF
Equipment	• Oscilloscope
Measurement point	• TP2706 (PB FM),[PRE/REC BOARD]
Trigger slope (–)	• TP2711 (DRUM FF),[PRE/REC BOARD]
Adjustment tool	• Presetting unit [PTU94008]
Specification	• FM waveform flat

Note : *Set VCR to the mode A by remote controller.*

(1) Connect an oscilloscope to TP2706 and external trigger from TP2711 (positive slope).
(2) Playback the LP stairstep portion of the alignment tape at LP 2x mode.
(3) Set the automatic tracking control to the OFF by simultaneously pressing the **/I//** button on the remote controller.
(4) Adjust for maximum level of playback FM waveform by depressing TV PROG. "+" or "-" buttons.
(5) Adjust by pressing "M+D" or "M+E" buttons of presetting unit for FM waveform is flat as shown in Fig. 3-3-5.
(6) Adjust for half level of playback FM waveform from maximum level by depressing TV PROG. "+" or "-" buttons.
(7) Readjust by pressing "M+D" or "M+E" buttons of presetting unit for FM waveform is flat as shown in Fig. 3-3-5.
(8) Record the color bar signal by LP mode and play it back in FWD slow mode.
(9) Repeat steps (4) and (5).

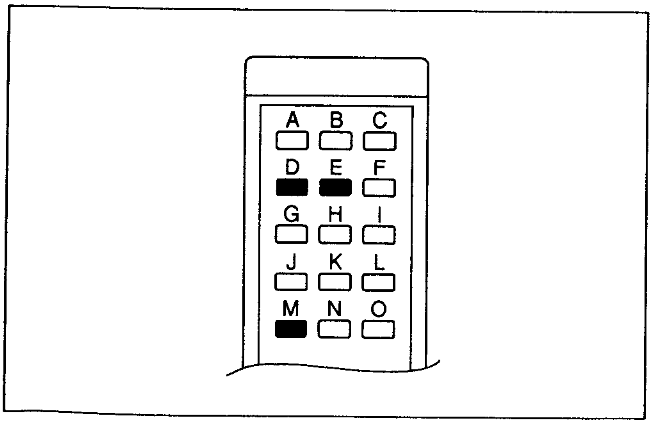


Fig. 3-3-4 Presetting unit

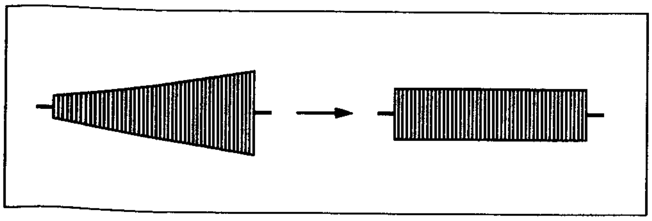


Fig. 3-3-5 PB FM

3.4 VIDEO CIRCUIT

Notes:
- *Unless otherwise specified,all measurement point and adjustment parts are located on the MAIN BOARD.*
- *VIDEO circuit adjustments are performed by the EVR system by use of the presetting unit and numeric-key remote controller.*
- *S-INPUT means Y/C separated video signal in the chart.*
- *Set VCR to the mode A by remote controller.*

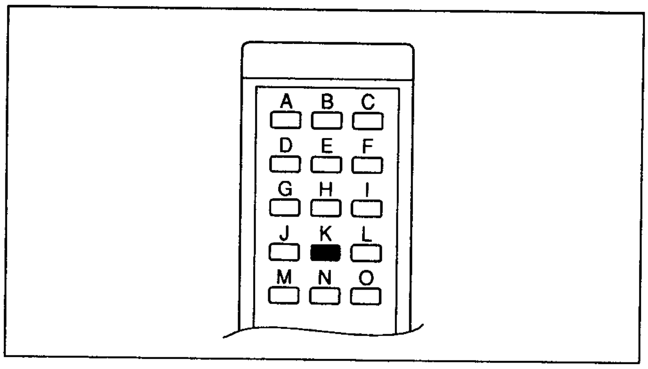


Fig.3-4-1 Presetting unit

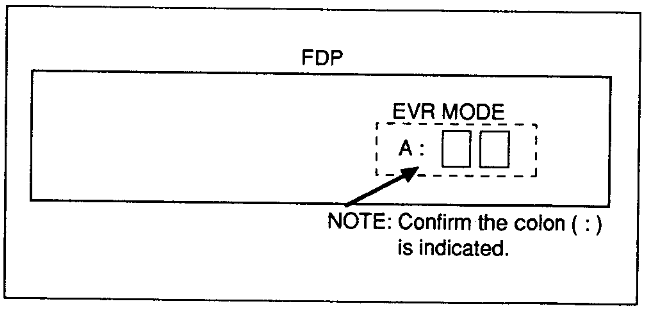


Fig.3-4-2 EVR mode

3.4.1 AGC Y level

Signal	• Colour bar
Mode	• EE • S-VHS
Equipment	• Oscilloscope
Measurement point	• TP3 (V.OUT) [TERMINAL board]
Adjustment tool	• Presetting unit [PTU94008] • Numeric-key remote controller
EVR mode	• A : 11
Specification	• 1.00 ± 0.03Vp-p (terminated)

(1) Connect an oscilloscope to TP3.
(2) Set EVR mode by pressing "K" button of the presetting unit more than 2 seconds.
(3) Set "A : 11" pressing 1 numeric key twice of the remote controller.
(4) Adjust TV PROG "–" or "+" button for 1.00 ± 0.03 Vp-p.
(5) Set normal VCR mode by pressing "K" button of the presetting unit again so adjustment data is memorized.

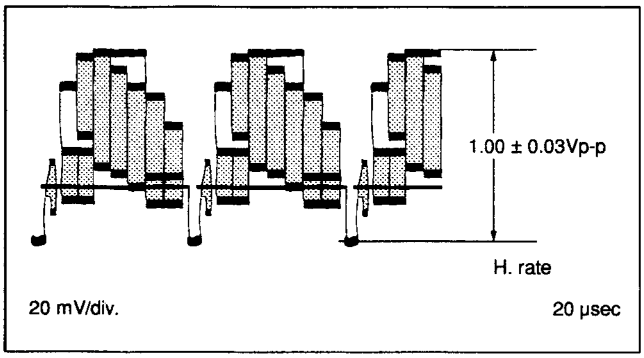


Fig. 3-4-3 EE Y level

3.4.2 D/A level

Signal	• Colour bar
Mode	• EE • S-VHS
Equipment	• Oscilloscope
Measurement point	• TP3(V.OUT) [TERMINAL board]
Adjustment tool	• Presetting unit [PTU94008] • Numeric-key remote controller
EVR mode	• A : 16
Specification	• 1.00 ± 0.03Vp-p (terminated)

(1) Connect an oscilloscope to TP3.
(2) Set EVR mode by pressing "K" button of the presetting unit more than 2 seconds.
(3) Set "A : 16" by press 1 and 6 numeric keys of the remote controller.
(4) Adjust TV PROG "−" or "+" button of the remote controller for 1.00 ± 0.03Vp-p.
(5) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

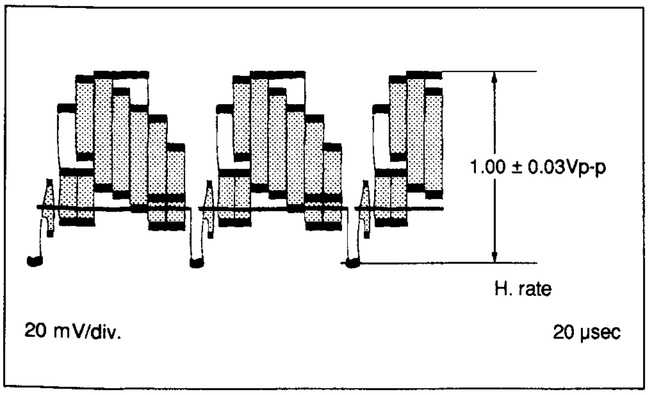


Fig. 3-4-4 D/A level

3.4.3 White/dark clip (S-VHS/VHS)

Signal	• Colour bar
Mode	• EE • S-VHS/VHS
Equipment	• Oscilloscope
Measurement point	• TP3003 (W/D CLIP),[VIDEO UNIT board]
Adjustment tool	• Presetting unit [PTU94008] • Numeric-key remote controller
EVR mode	• A : 14
Specification	• WHITE CLIP : 110 ± 4%(S-VHS) 90 ± 4%(VHS) DARK CLIP : 70 ± 8%(S-VHS) 45 ± 8%(VHS)

(1) Connect an oscilloscope to TP3003.
(2) Set EVR mode by pressing "K" button of the presetting unit more than 2 seconds.
(3) Set "A : 14" pressing 1 and 4 numeric keys of the remote controller.
(4) Adjust TV PROG "−" or "+" button for 110 ± 4%(S-VHS), 90 ± 4%(VHS) white clip and 70 ± 8%(S-VHS), 45 ± 8%(VHS) dark clip as shown in Fig.3-4-4.
(5) Set normal VCR mode by pressing "K" button of the presetting unit again so adjustment data is memorized.

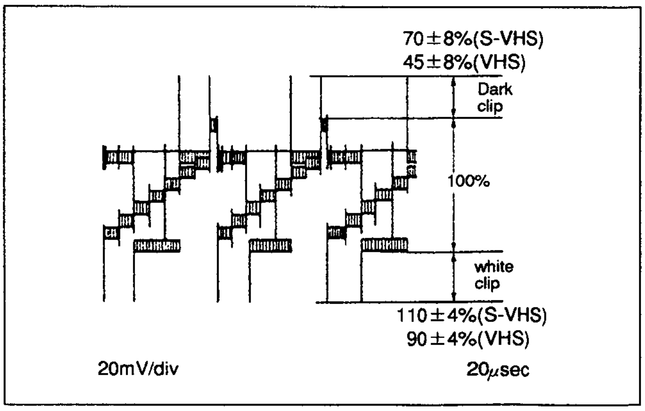


Fig.3-4-5 White/dark clip

3.4.4 Sub emphasis input level

Signal	• Colour bar
Mode	• EE • S-VHS
Equipment	• Oscilloscope
Measurement point	• TP3001 (SUB EMP),VIDEO UNIT board]
Adjustment tool	• Presetting unit [PTU94008] • Numeric-key remote controller
EVR mode	• A : 15
Specification	• 400 ± 20 mVp-p

(1) Connect an oscilloscope to TP3001.
(2) Set EVR mode by pressing "K" button of the presetting unit more than 2 seconds.
(3) Set "A : 15" pressing 1 and 5 numeric keys of the remote controller.
(4) Adjust TV PROG "−" or "+" button of the remote controller for 400 ± 20 mVp-p.
(5) Set normal VCR mode by pressing "K" button of the presetting unit again so adjustment data is memorized.

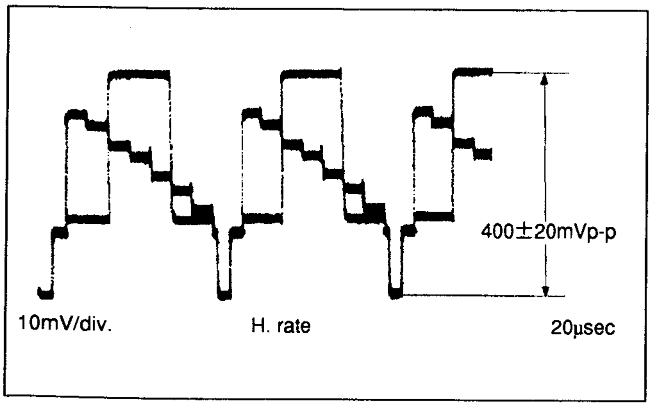


Fig. 3-4-6 Sub emphasis input level

3.4.5 PB Y level (S-VHS/VHS)

Signal	• Alignment tape [MHVE-2, MH-2H], • Colour bar
Mode	• PB
Equipment	• Oscilloscope
Measurement point	• TP3(V.OUT) [TERMINAL board]
Adjustment tool	• Presetting unit [PTU94008] • Numeric-key remote controller
EVR mode	• A : 11
Specification	• 1.00 ± 0.03Vp-p (terminated)

(1) Connect an oscilloscope to TP3.
(2) Set EVR mode by pressing "K" button of the presetting unit more than 2 seconds.
(3) Set "A : 11" pressing 1 numeric key twice of the remote controller.
(4) Playback the color bar signal of the alignment tape. (MH-2H and MHVE-2)
(5) Adjust TV PROG "−" or "+" button for 1.00 ± 0.03Vp-p as shown in Fig.3-4-7.
(6) Set normal VCR mode by pressing "K" button of the presetting unit again so adjustment data is memorized.

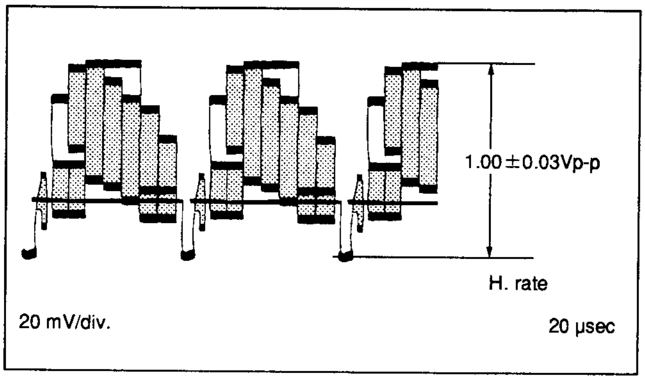


Fig.3-4-7 PB Y level

3.4.6 SP/LP REC colour level

Signal	• Alignment tape [MH-2H] Colour bar
Mode	• PB (SP/LP) • REC →PB : SP/LP • S-VHS
Equipment	• Oscilloscope
Measurement point	• PB colour out
Trigger slope (−)	• TP(2711) (DRUM FF) [PRE/REC board]
Adjustment tool	• Presetting unit [PTU94008] • Numeric-key remote controller • LPF(PTU93006)
EVR mode	• A : 2
Specification	• "B" x 130 ± 5% : SP • "B" x 100 ± 5% : LP

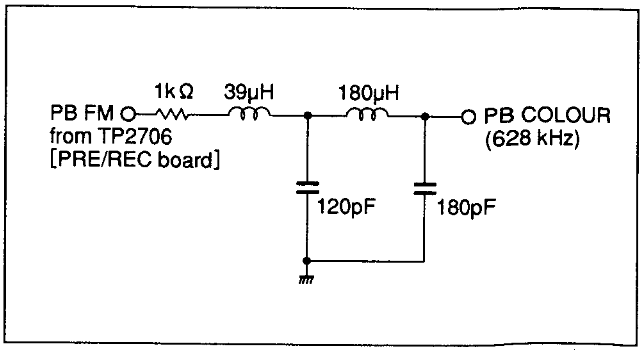


Fig. 3-4-8 LPF

(1) Use a LPF as shown in Fig. 3-4-8.
(2) Playback the SP (LP) colour bar signal of MH-2H alignment tape.
(3) Set the tracking to the Auto tracking off position by pressing the ***///*** button of the remote controller.
(4) Adjust by pressing the TV PROG "−" or "+" buttons of the remote controller for maximum level of the colour waveform and make a note of the higher colour level "B".
(5) Press the STOP/EJECT button and eject the MH-2H alignment tape.
(6) Set EVR mode by pressing "K" button of the presetting unit more than 2 seconds.
(7) Set "A : 2" by pressing 2 numeric key of the remote controller.
(8) Record a colour bar signal in SP (LP) mode, and playback recorded colour bar signal.
(9) Before recording, adjust TV PROG "−" or "+" button of the remote controller so that the higher level channel becomes 130 ± 5% : SP (100 ± 5% : LP) of the note "B" level during playback as shown in Fig. 3-4-9.
(10) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

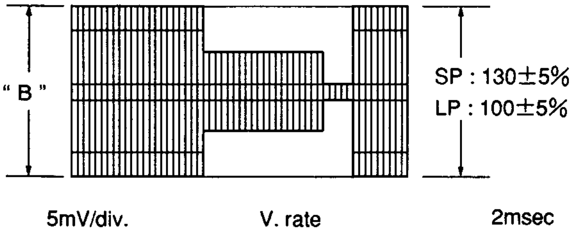


Fig. 3-4-9 REC colour level

3.4.7 S-VHS VIDEO EQ

Signal	•S INPUT •Video sweep
Mode	•SP/LP •REC (EDIT:OFF) •PB (EDIT:ON) •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP1 (Y.OUT) [TERMINAL BOARD]
Adjustment part	•R3215 (S-SP VIDEO EQ) [VIDEO UNIT board] •R3218 (S-EP VIDEO EQ) [VIDEO UNIT board]
Specification	•3.6 ± 0.2 scale R3215 : SP •2.8 ± 0.2 scale R3218 : LP

(1) Connect an oscilloscope to TP1.
(2) Record a video sweep signal in S-VHS SP mode, then play it back.
(3) If the sweeper's 100 kHz marker frequency is for 4 scale divisions on the oscilloscope screen, adjust R3215 so that 3.58 MHz marker level becomes 3.6 ± 0.2 scale divisions.
(4) Record a video sweep signal in S-VHS LP mode, then play it back.
(5) If the sweeper's 100 kHz marker frequency is for 4 scale divisions on the oscilloscope screen, adjust R3218 so that 3.58 MHz marker level becomes 2.8 ± 0.2 scale divisions.

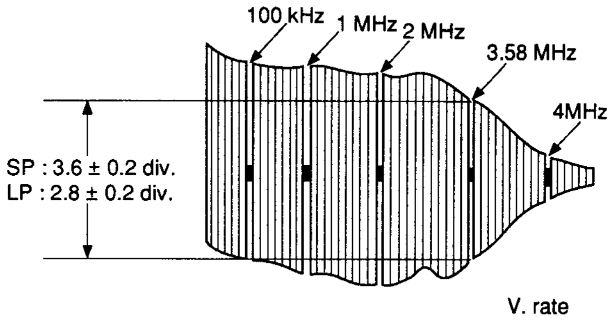


Fig. 3-4-10 S-VHS VIDEO EQ

Alternate method

(1) Record a colour bar signal in S-VHS SP mode,
(2) Play it back to observe the picture and adjust R3215 for best resolution, without impaired S/N.
(3) So after adjustment, confirm black or white spot.
(4) Record a colour bar signal in S-VHS LP mode.
(5) Play it back to observe the picture and adjust R3218 for best resolution, without impaired S/N.
(6) So after adjustment, confirm black or white spot.

3.5 SYSCON CIRCUIT

Notes:
- *Unless otherwise specified,all measurement point and adjustment parts are located on the MAIN BOARD.*
- *When performing this adjustment,remove the MECHANISM assy.*

3.5.1 Timer clock

Signal	•No signal
Mode	•EE
Equipment	•Frequency counter
Measurement point	•TP702 round (SYS. CLK)
Adjustment part	•C701 (TIMER CLOCK)
Specification	•1024.008 ± 0.001 Hz [976.5549 ± 0.0010 usec]

(1) Connect the frequency counter to TP702 round and GND.
(2) Connect the short wire between TP701 round and IC701 pin 63.
(3) Short the leads of capacitor C701 once in order to reset IC701.
(4) Disconnect the short wire then connect it again quickly.
(5) Adjust C701 for 1024.008 ± 0.001 Hz.
(976.5549 ± 0.0010 usec)

3.6 AUDIO CIRCUIT

Note: *Unless otherwise specified, all measurement point and adjustment parts are located on the PRE/REC BOARD.*

3.6.1 Audio REC FM

Signal	• AUX • VIDEO : Colour bar • Audio : No signal
Mode	• REC → PB : LP • S-VHS
Equipment	• Oscilloscope
Measurement point	• TP553 (A. PB FM)
Trigger slope (–)	• TP2711 (DRUM FF)
Adjustment part	• VR501 (A. REC FM LEVEL)
Specification	• 1000 ± 100 mVp-p

(1) Connect an oscilloscope to TP553.
(2) Record a colour bar signal without an audio signal in S-VHS LP mode then playback.
(3) Adjust VR501 for 1000 mVp-p playback level of higher channel level before recording.
(4) Confirm that the lower channel level is more than 700 mVp-p.

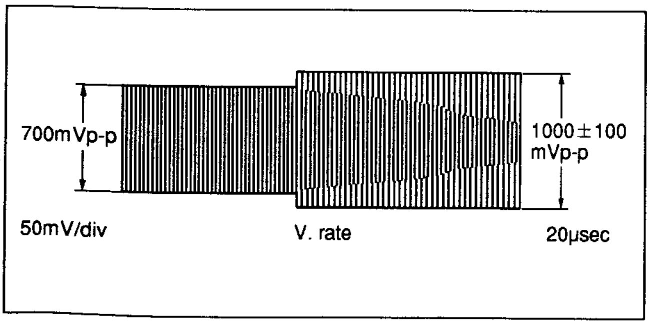


Fig. 3-6-1 Audio REC FM level

3.7 TUNER CIRCUIT

Note: *Unless otherwise specified, all measurement point and adjustment parts are located on the IF UNIT.*

3.7.1 RF VCO

Signal	• TV broadcasting
Mode	• Tuner
Equipment	• TV monitor
Measurement point	• IF UNIT
Adjustment tool	• IF VR
Specification	• Minimum noise

Note: *Adjust IF VR (RF AGC) to correct for excess noise in the picture or when streaks cross interference occurs due to strong electrical fields.*

(1) Adjust IF VR to minimize noise or streaks on the TV screen.
(2) Adjust for noisy picture with strong signal. Then adjust until noise just disappears. Select other channels to confirm proper pick-up of channels.

3.8 DEMODULATOR CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the DEMODULATOR BOARD.*

3.8.1 Stereo separation

Signal	• Sweep generator output (90 dBμ, 1 kHz)
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• CN1501-pin3
Adjustment part	• VR1501 (SEPARATION)
Specification	• Minimum

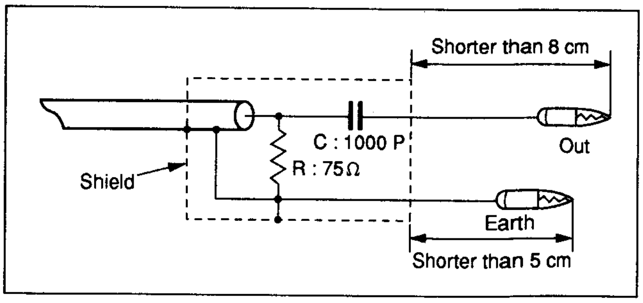


Fig. 3-8-1 Sweeper probe

(1) Use a sweeper probe as shown in Fig. 3-8-1.
(2) Supply 1 kHz R-only modulated IF signal to IF terminal of U/V tuner (front end).
(3) Connect an oscilloscope to CN1510-pin3.
(4) Adjust VR1501 for minimum output level.

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

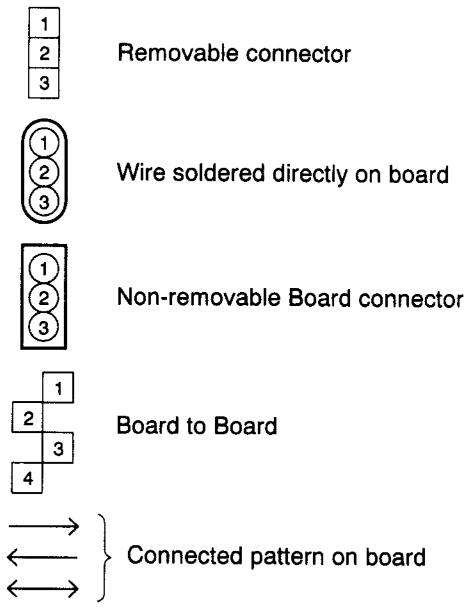
Unless otherwise specified.

1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or IN4148M (refer to parts list).

2. Indications of control voltage

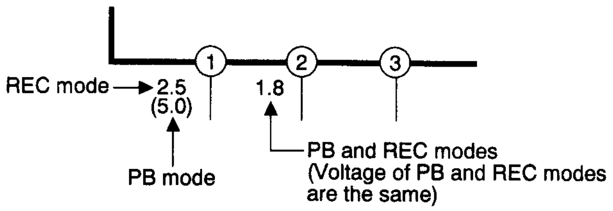
AUX : Active only at high
$\overline{\text{AUX}}$ or AUX(L) : Active at low

3. Interpreting Connector indications


1
2
3
Removable connector
1
2
3
Wire soldered directly on board
1
2
3
Non-removable Board connector
1
2
3
4
Board to Board
Connected pattern on board

4. Voltage measurement

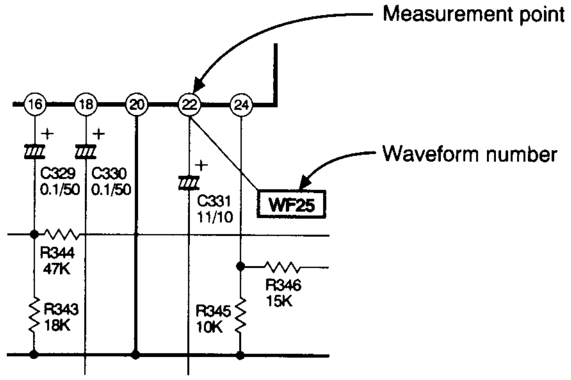
1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
   — : Unmeasurable or unnecessary to measure
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.


1
2
3
REC mode
2.5
(5.0)
1.8
PB mode
PB and REC modes
(Voltage of PB and REC modes are the same)

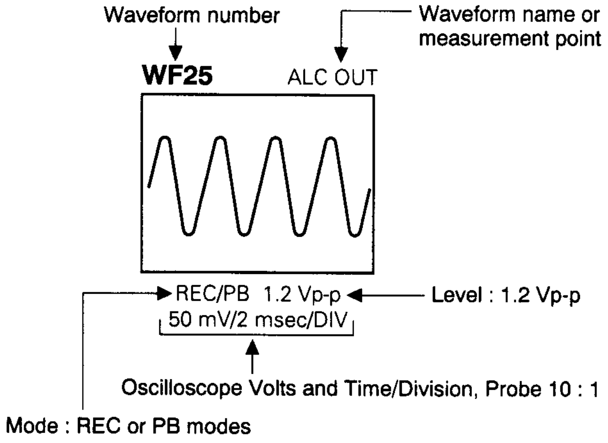
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test chatrs in the E-E mode
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.


Measurement point
16
18
20
22
24
C329
0.1/50
C330
0.1/50
C331
11/10
WF25
Waveform number
R344
47K
R343
18K
R345
10K
R346
15K

5) Waveform indications


Waveform number
Waveform name or measurement point
WF25
ALC OUT
REC/PB 1.2 Vp-p
50 mV/2 msec/DIV
Level : 1.2 Vp-p
Oscilloscope Volts and Time/Division, Probe 10 : 1
Mode : REC or PB modes

6. Signal path Symbols

The arrows indicate the signal path as follows.

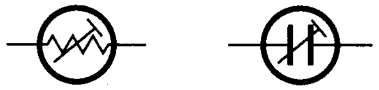
⇨	Playback signal path
➩	Playback and recording signal path
➡	Recording signal path (including E-E signal path)
⇨▷	Capstan servo path
➡▶	Drum servo path

(Example)

⇨ R-Y	Playback R-Y signal path
➡ Y	Recording Y signal path

7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

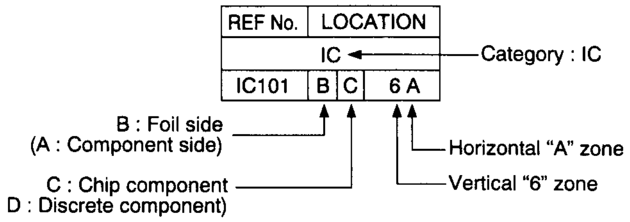
CIRCUIT BOARD NOTES

1. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) indicated.

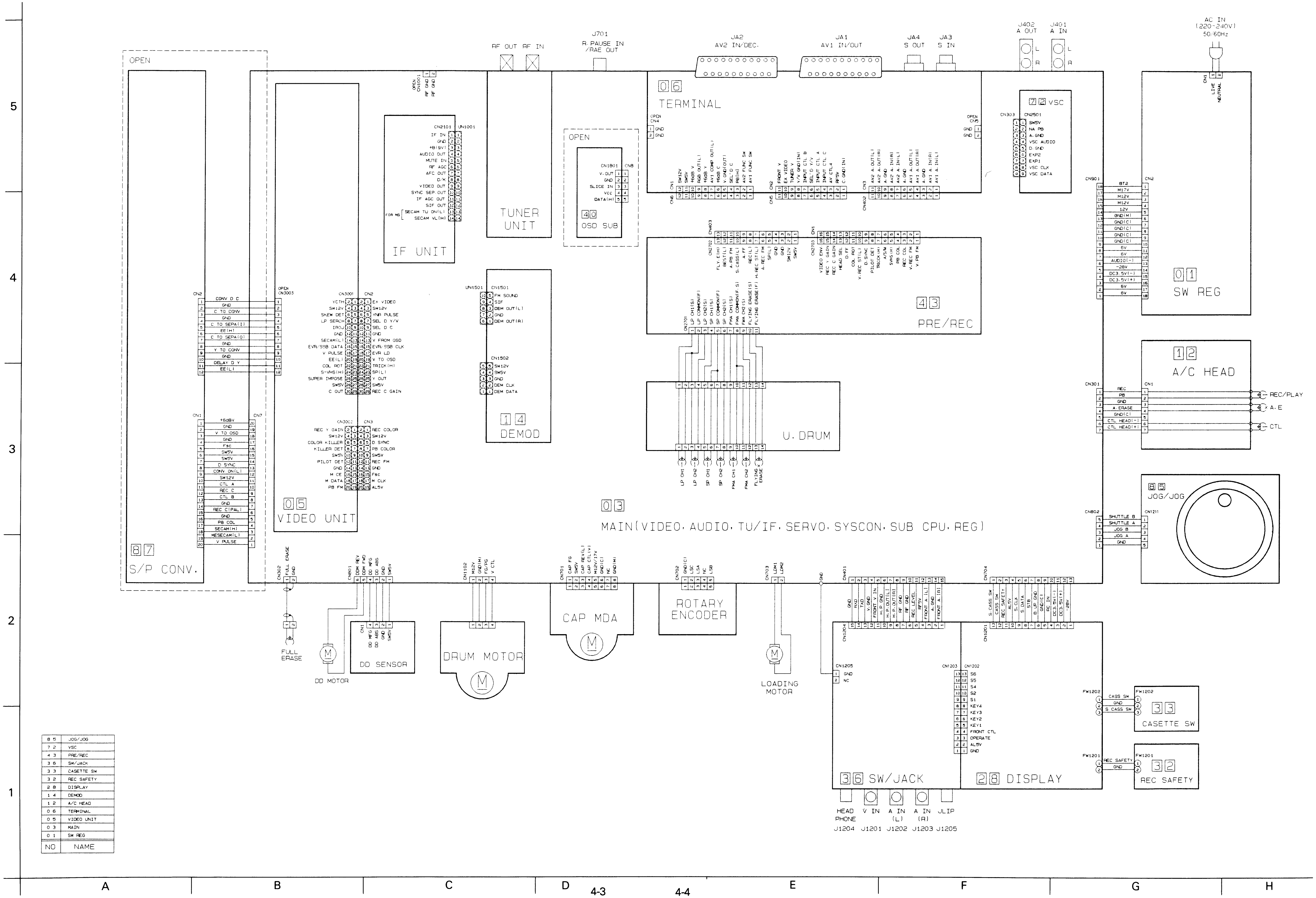
2. Parts location guides

Parts location are indicated by guide scale on the circuit board.


REF No.
LOCATION
IC
Category : IC
IC101
B
C
6 A
B : Foil side
(A : Component side)
C : Chip component
D : Discrete component)
Horizontal "A" zone
Vertical "6" zone

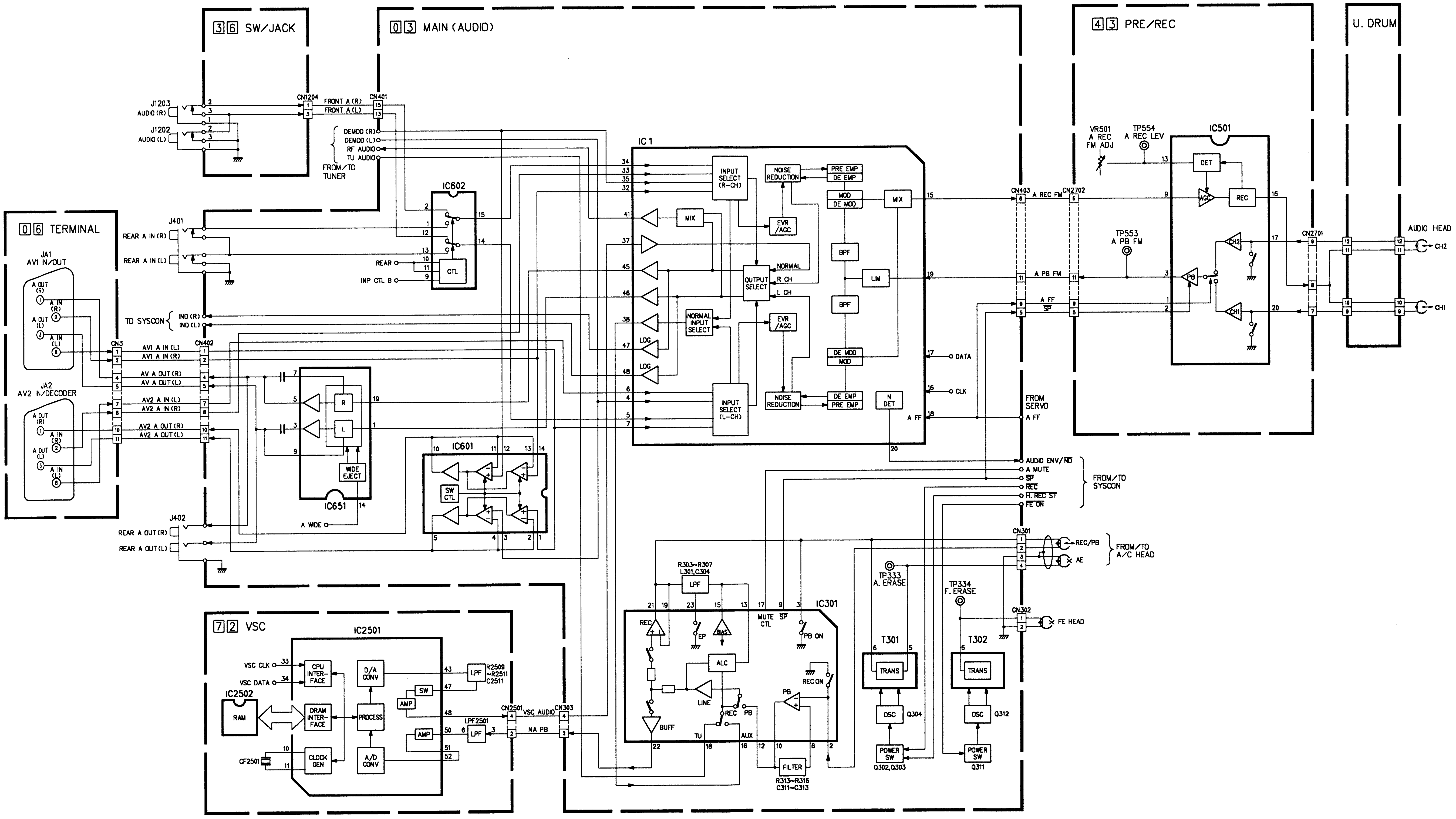
Note:
For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

4.1 BOARD INTERCONNECTIONS


OPEN
S/P CONV.
87
VIDEO UNIT
05
IF UNIT
TUNER UNIT
RF OUT
RF IN
J701
R.PAUSE IN /RAE OUT
OPEN
OSD SUB
40
DEMOD
14
TERMINAL
06
JA2
AV2 IN/DEC.
JA1
AV1 IN/OUT
JA4
S OUT
JA3
S IN
J402
A OUT
J401
A IN
VSC
72
AC IN (220-240V) 50/60Hz
SW REG
01
PRE/REC
43
U. DRUM
A/C HEAD
12
REC/PLAY
A.E
CTL
JOG/JOG
85
MAIN(VIDEO, AUDIO, TU/IF, SERVO, SYSCON, SUB CPU, REG)
03
FULL ERASE
DD MOTOR
DD SENSOR
DRUM MOTOR
CAP MDA
ROTARY ENCODER
LOADING MOTOR
SW/JACK
36
DISPLAY
28
CASETTE SW
33
REC SAFETY
32
HEAD PHONE
V IN
A IN (L)
A IN (R)
JLIP
J1204
J1201
J1202
J1203
J1205
A
B
C
D
E
F
G
H
1
2
3
4
5

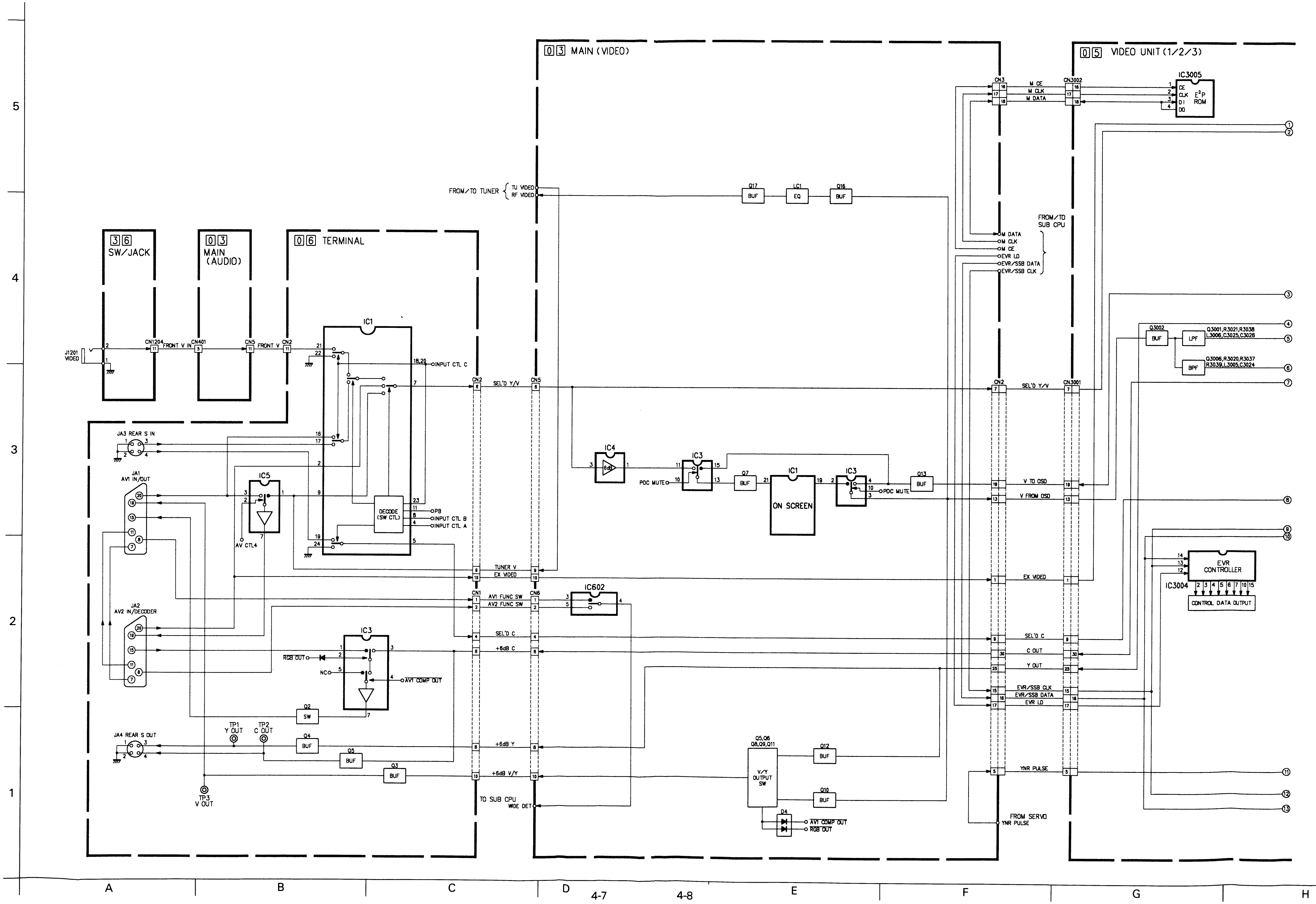
NO	NAME
8 5	JOG/JOG
7 2	VSC
4 3	PRE/REC
3 6	SW/JACK
3 3	CASETTE SW
3 2	REC SAFETY
2 8	DISPLAY
1 4	DEMOD
1 2	A/C HEAD
0 6	TERMINAL
0 5	VIDEO UNIT
0 3	MAIN
0 1	SW REG

4.2 AUDIO BLOCK DIAGRAM

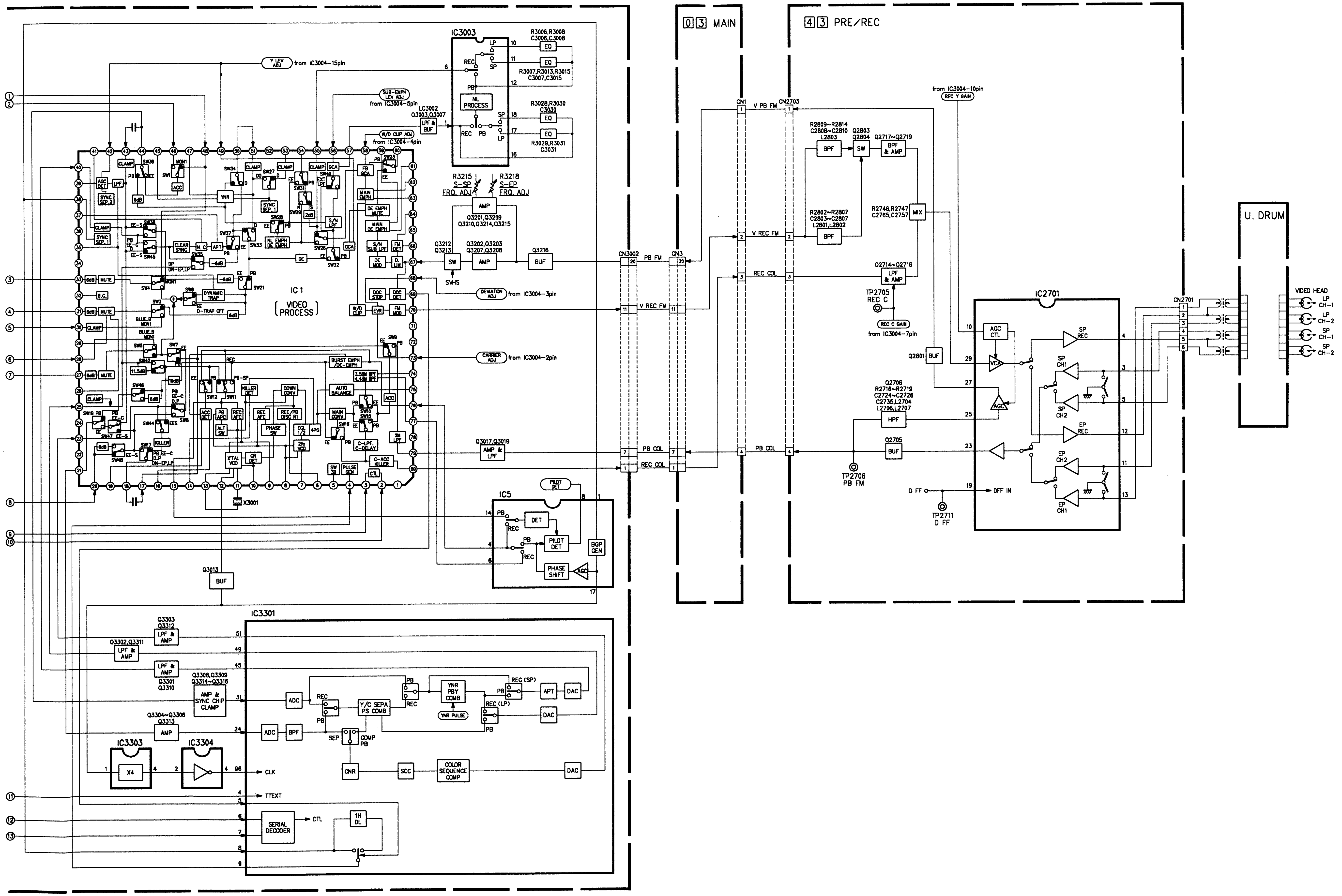


36 SW/JACK
03 MAIN (AUDIO)
43 PRE/REC
U. DRUM
06 TERMINAL
72 VSC
J1203
AUDIO (R)
J1202
AUDIO (L)
CN1204
CN401
FRONT A (R)
FRONT A (L)
DEMOD (R)
DEMOD (L)
RF AUDIO
TU AUDIO
FROM/TO TUNER
J401
REAR A IN (R)
REAR A IN (L)
IC602
CTL
REAR
INP CTL B
TO SYSCON
IND (R)
IND (L)
JA1
AV1 IN/OUT
A OUT (R)
A IN (R)
A OUT (L)
A IN (L)
JA2
AV2 IN/DECODER
CN3
CN402
AV1 A IN (L)
AV1 A IN (R)
AV A OUT (R)
AV A OUT (L)
AV2 A IN (L)
AV2 A IN (R)
AV2 A OUT (R)
AV2 A OUT (L)
IC651
WIDE EJECT
A WIDE
IC601
SW CTL
J402
REAR A OUT (R)
REAR A OUT (L)
IC1
INPUT SELECT (R-CH)
NOISE REDUCTION
PRE EMP
DE EMP
MOD
DE MOD
MIX
EVR /AGC
OUTPUT SELECT
NORMAL
R CH
L CH
NORMAL INPUT SELECT
LOG
BPF
LIM
INPUT SELECT (L-CH)
N DET
DATA
CLK
A FF
FROM SERVO
CN403
CN2702
A REC FM
A PB FM
A FF
SP
VR501
A REC FM ADJ
TP554
A REC LEV
TP553
A PB FM
IC501
DET
AGC
REC
PB
CH2
CH1
CN2701
AUDIO HEAD
AUDIO ENV/ND
A MUTE
SP
REC
H. REC ST
FE ON
FROM/TO SYSCON
CN301
REC/PB
AE
FROM/TO A/C HEAD
TP333
A. ERASE
TP334
F. ERASE
CN302
FE HEAD
R303~R307
L301,C304
LPF
IC301
MUTE CTL
SP
EP
BIAS
PB ON
ALC
REC ON
LINE
BUFF
TU
AUX
FILTER
R313~R316
C311~C313
T301
T302
TRANS
OSC
Q304
Q312
POWER SW
Q302,Q303
Q311
IC2501
IC2502
RAM
VSC CLK
VSC DATA
CPU INTER-FACE
DRAM INTER-FACE
CLOCK GEN
CF2501
D/A CONV
A/D CONV
PROCESS
SW
AMP
LPF
R2509
~R2511
C2511
LPF2501
CN2501
CN303
VSC AUDIO
NA PB

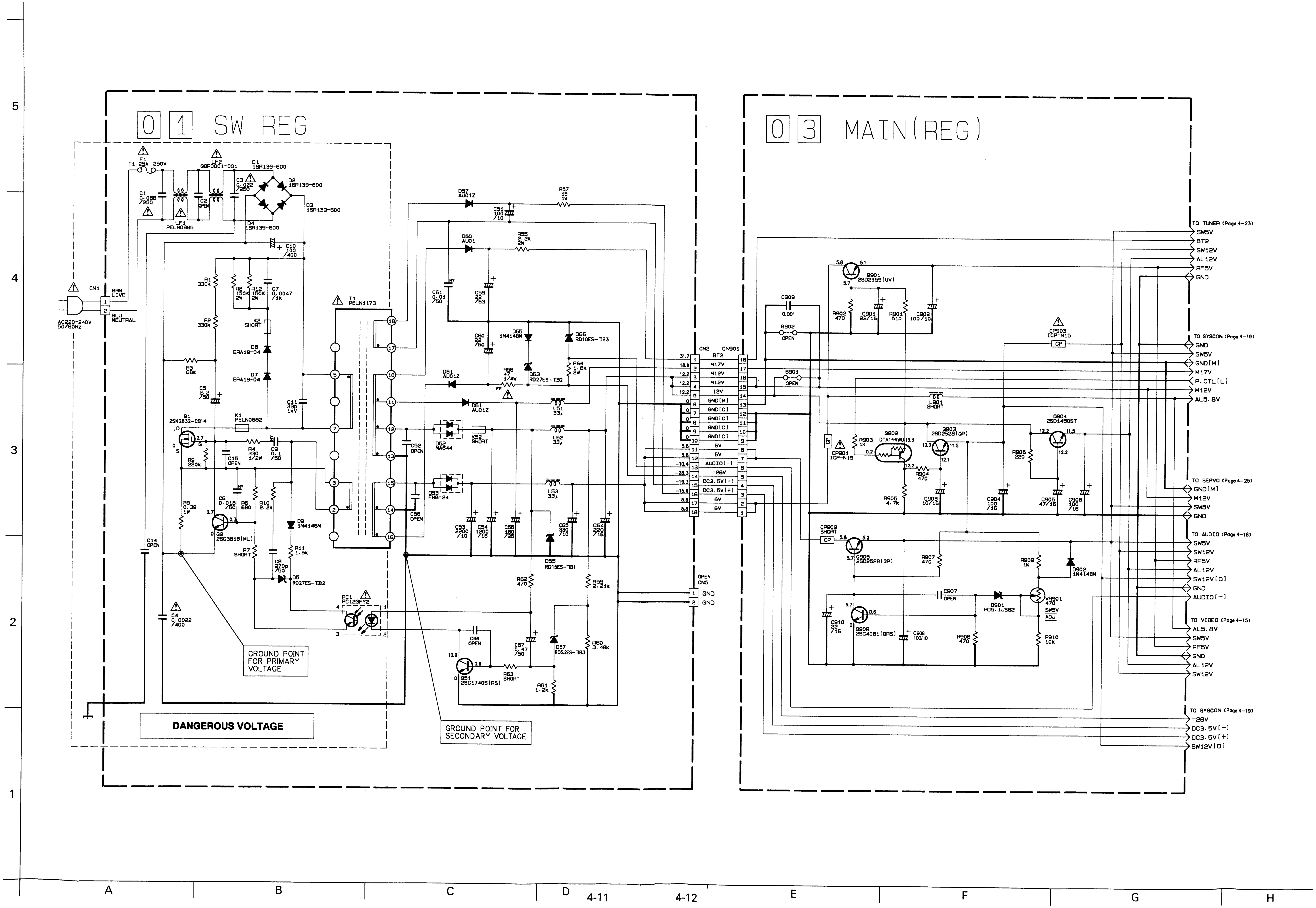
4.3 VIDEO BLOCK DIAGRAM



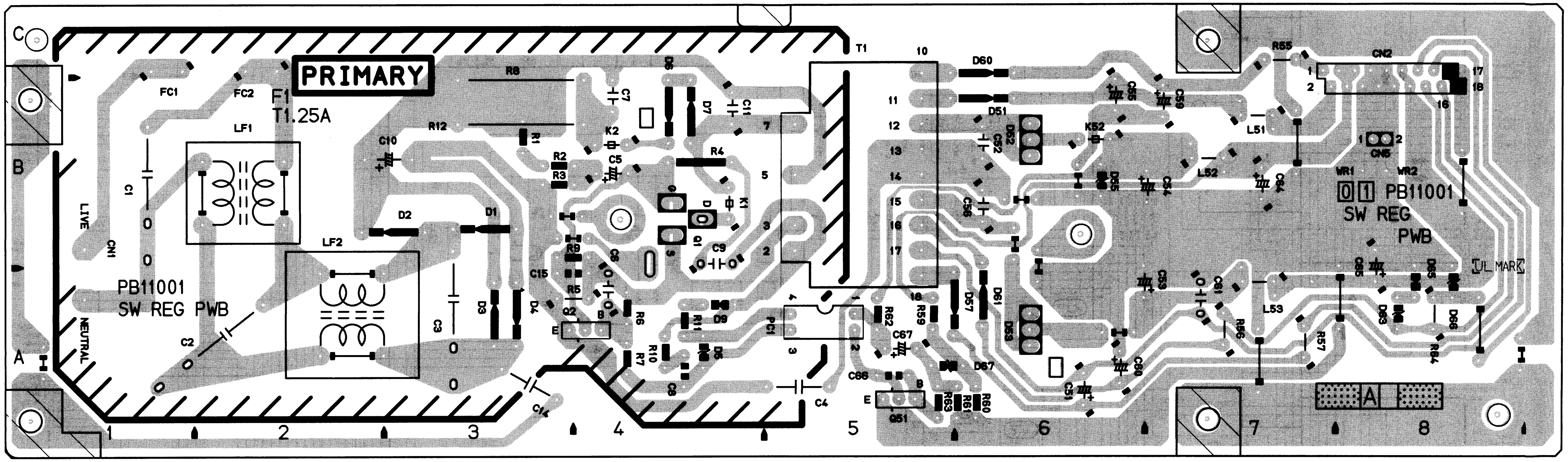
3 6 SW/JACK
0 3 MAIN (AUDIO)
0 6 TERMINAL
0 3 MAIN (VIDEO)
0 5 VIDEO UNIT (1/2/3)
J1201 VIDEO
CN1204
FRONT V IN
CN401
CN5
FRONT V
CN2
IC1
INPUT CTL C
DECODE (SW CTL)
PB
INPUT CTL B
INPUT CTL A
JA3 REAR S IN
JA1 AV1 IN/OUT
IC5
AV CTL4
JA2 AV2 IN/DECODER
IC3
RGB OUT
NC
AV1 COMP OUT
Q2 SW
JA4 REAR S OUT
TP1 Y OUT
TP2 C OUT
Q4 BUF
Q5 BUF
Q3 BUF
TP3 V OUT
SEL'D Y/V
TUNER V
EX VIDEO
CN1
CN6
AV1 FUNC SW
AV2 FUNC SW
IC602
SEL'D C
+6dB C
+6dB Y
+6dB V/Y
TO SUB CPU WIDE DET
FROM/TO TUNER
TU VIDEO
RF VIDEO
Q17 BUF
LC1 EQ
Q16 BUF
IC4 6dB
PDC MUTE
Q7 BUF
IC1 ON SCREEN
Q13 BUF
V TO OSD
V FROM OSD
Q5,Q6 Q8,Q9,Q11
V/Y OUTPUT SW
Q12 BUF
Q10 BUF
D4
AV1 COMP OUT
RGB OUT
CN3
M CE
M CLK
M DATA
CN3002
IC3005
CE
CLK
DI
DO
E²P ROM
FROM/TO SUB CPU
M DATA
M CLK
M CE
EVR LD
EVR/SSB DATA
EVR/SSB CLK
Q3002 BUF
LPF
BPF
Q3001,R3021,R3038 L3006,C3025,C3026
Q3006,R3020,R3037 R3039,L3005,C3024
CN3001
EVR CONTROLLER
IC3004
CONTROL DATA OUTPUT
C OUT
Y OUT
YNR PULSE
FROM SERVO YNR PULSE
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
A
B
C
D
E
F
G
H
1
2
3
4
5


IC1
VIDEO PROCESS
IC3003
LP
REC
SP
PB
NL PROCESS
EQ
R3006,R3008 C3006,C3008
R3007,R3013,R3015 C3007,C3015
R3028,R3030 C3030
R3029,R3031 C3031
Y LEV ADJ from IC3004-15pin
SUB-EMPH LEV ADJ from IC3004-5pin
LC3002 Q3003,Q3007
LPF & BUF
W/D CLIP ADJ from IC3004-4pin
R3215 S-SP FRQ. ADJ
R3218 S-EP FRQ. ADJ
AMP
Q3201,Q3209 Q3210,Q3214,Q3215
Q3212 Q3213
SW
SVHS
Q3202,Q3203 Q3207,Q3208
Q3216
BUF
DEVIATION ADJ from IC3004-3pin
CARRIER ADJ from IC3004-2pin
Q3017,Q3019
AMP & LPF
PILOT DET
IC5
PB
REC
DET
PILOT DET
BGP GEN
PHASE SHIFT
AGC
X3001
Q3013
BUF
CLAMP
AGC DET
LPF
SYNC SEP.2
SYNC SEP.1
YNR
MUTE
B.C.
6dB
-6dB
DYNAMIC TRAP
D-TRAP OFF
CLEAR SYNC
N.C
APT
DE
NL EMPH DE EMPH
MAIN EMPH
DE EMPH MUTE
MAIN DE EMPH
S/N SUB LPF
FM DET
DE MOD
D. LIM
DOC STOP
DOC DET
W/D CLIP
EVR
FM MOD
FB GCA
GCA
S/N LPF
2dB
BURST EMPH /DE-EMPH
3.58M BPF 4.43M BPF
AUTO BALANCE
ACC
MAIN CONV
2M LPF
C-LPF, C-DELAY
C-ACC KILLER
CTL
PULSE GEN
SW 30
2fc VCO
ECL 1/2
4PG
PHASE SW
REC AFC
REC/PB DISC R1
DOWN CONV
KILLER DET
ACC DET
PB AFC
REC AFC
ALT SW
X'TAL VCO
CR DET
11.5dB
BLUE.B MON1
EE-S
EE-C
DP
DH-EP,LP
IC3301
Q3303 Q3312
LPF & AMP
Q3302,Q3311
LPF & AMP
Q3301 Q3310
Q3308,Q3309 Q3314~Q3318
AMP & SYNC CHIP CLAMP
Q3304~Q3306 Q3313
AMP
ADC
BPF
Y/C SEPA PS COMB
YNR PBY COMB
YNR PULSE
APT
DAC
REC (SP)
REC (LP)
SEP
COMP
CNR
SCC
COLOR SEQUENCE COMP
IC3303
X4
IC3304
CLK
TTEXT
SERIAL DECODER
CTL
1H DL
0 3 MAIN
CN1
CN3002
CN3
V PB FM
V REC FM
REC COL
PB FM
PB COL
REC COL
4 3 PRE/REC
CN2703
from IC3004-10pin REC Y GAIN
R2809~R2814 C2808~C2810 L2803
Q2803 Q2804
Q2717~Q2719
BPF
SW
BPF & AMP
R2802~R2807 C2803~C2807 L2801,L2802
R2748,R2747 C2765,C2757
MIX
Q2714~Q2716
LPF & AMP
TP2705 REC C
REC C GAIN from IC3004-7pin
Q2801
BUF
Q2706 R2716~R2719 C2724~C2726 C2735,L2704 L2706,L2707
HPF
Q2705
BUF
TP2706 PB FM
D FF
TP2711 D FF
IC2701
AGC CTL
VCA
AGC
SP REC
SP CH1
SP CH2
EP REC
EP CH2
EP CH1
DFF IN
CN2701
U. DRUM
VIDEO HEAD
LP CH-1
LP CH-2
SP CH-1
SP CH-2
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
I
J
K
L
M
N
O
P

4.4 SWITCHING REGULATOR SCHEMATIC DIAGRAM


01 SW REG
03 MAIN(REG)
DANGEROUS VOLTAGE
GROUND POINT FOR PRIMARY VOLTAGE
GROUND POINT FOR SECONDARY VOLTAGE
AC220-240V 50/60Hz
CN1
BRN LIVE
BLU NEUTRAL
F1 T1.25A 250V
C1 0.068 /250
LF1 PELN0885
LF2 QQR0001-001
C2 OPEN
C3 0.022 /250
D1 1SR139-600
D2 1SR139-600
D3 1SR139-600
D4 1SR139-600
C10 100 /400
R1 330K
R2 330K
R8 150K 2W
R12 150K 2W
C7 0.0047 /1K
K2 SHORT
D6 ERA18-04
D7 ERA18-04
R3 68K
C5 2.2 /50
C11 330 1KV
K1 PELN0562
Q1 2SK2632-CB14
R4 330 1/2W
C9 0.1 /50
R9 220K
C15 OPEN
C6 0.018 /50
R6 680
R10 2.2K
R5 0.39 1W
Q2 2SC3616(ML)
R7 SHORT
D9 1N4148M
R11 1.5K
C8 270p /50
D5 RD27ES-TB2
C14 OPEN
C4 0.0022 /400
PC1 PC123FY2
T1 PELN1173
D57 AU01Z
C51 100 /10
R57 15 1W
D50 AU01
R55 2.2K 2W
C61 0.01 /50
C59 22 /63
C60 22 /50
D65 1N4148M
D66 RD10ES-TB3
D61 AU01Z
R56 47 1/4W
D63 RD27ES-TB2
R64 1.8K 2W
D51 AU01Z
L51 33μ
D52 MA644
K52 SHORT
L52 33μ
C52 OPEN
D53 FMB-24
L53 33μ
C56 OPEN
C53 2200 /10
C54 1200 /16
C55 180 /25
C65 330 /10
C64 220 /16
D55 RD15ES-TB1
R62 470
R59 2.21K
C66 OPEN
C67 0.47 /50
D67 RD6.2ES-TB3
R60 3.48K
Q51 2SC1740S(RS)
R63 SHORT
R61 1.2K
OPEN CN5
GND
GND
CN2
CN901
BT2
M17V
M12V
M12V
12V
GND(M)
GND(C)
GND(C)
GND(C)
GND(C)
5V
5V
AUDIO(-)
-28V
DC3.5V(-)
DC3.5V(+)
5V
5V
31.7
18.9
12.2
12.2
-10.4
-28.3
-19.3
-15.6
5.8
C909 0.001
B902 OPEN
B901 OPEN
Q901 2SD2159(UV)
R902 470
C901 22/16
R901 510
C902 100/10
CP903 ICP-N15
L901 SHORT
CP901 ICP-N15
R903 1K
Q902 DTA144WU
Q903 2SD2528(QP)
R904 470
R905 4.7K
C903 10/16
Q904 2SD1450ST
R906 220
C904 100 /16
C905 47/16
C906 100 /16
CP902 SHORT
Q905 2SD2528(QP)
R907 470
R909 1K
D902 1N4148M
C907 OPEN
D901 RD5.1JSB2
VR901 470 SW5V ADJ
C910 22 /16
Q909 2SC4081(QRS)
C908 100/10
R908 470
R910 10K
TO TUNER (Page 4-23)
SW5V
BT2
SW12V
AL12V
RF5V
GND
TO SYSCON (Page 4-19)
GND
SW5V
GND(M)
M17V
P.CTL(L)
M12V
AL5.8V
TO SERVO (Page 4-25)
GND(M)
M12V
SW5V
GND
TO AUDIO (Page 4-18)
SW5V
SW12V
RF5V
AL12V
SW12V(D)
GND
AUDIO(-)
TO VIDEO (Page 4-15)
AL5.8V
SW5V
RF5V
GND
AL12V
SW12V
TO SYSCON (Page 4-19)
-28V
DC3.5V(-)
DC3.5V(+)
SW12V(D)
1
2
3
4
5
A
B
C
D
E
F
G
H

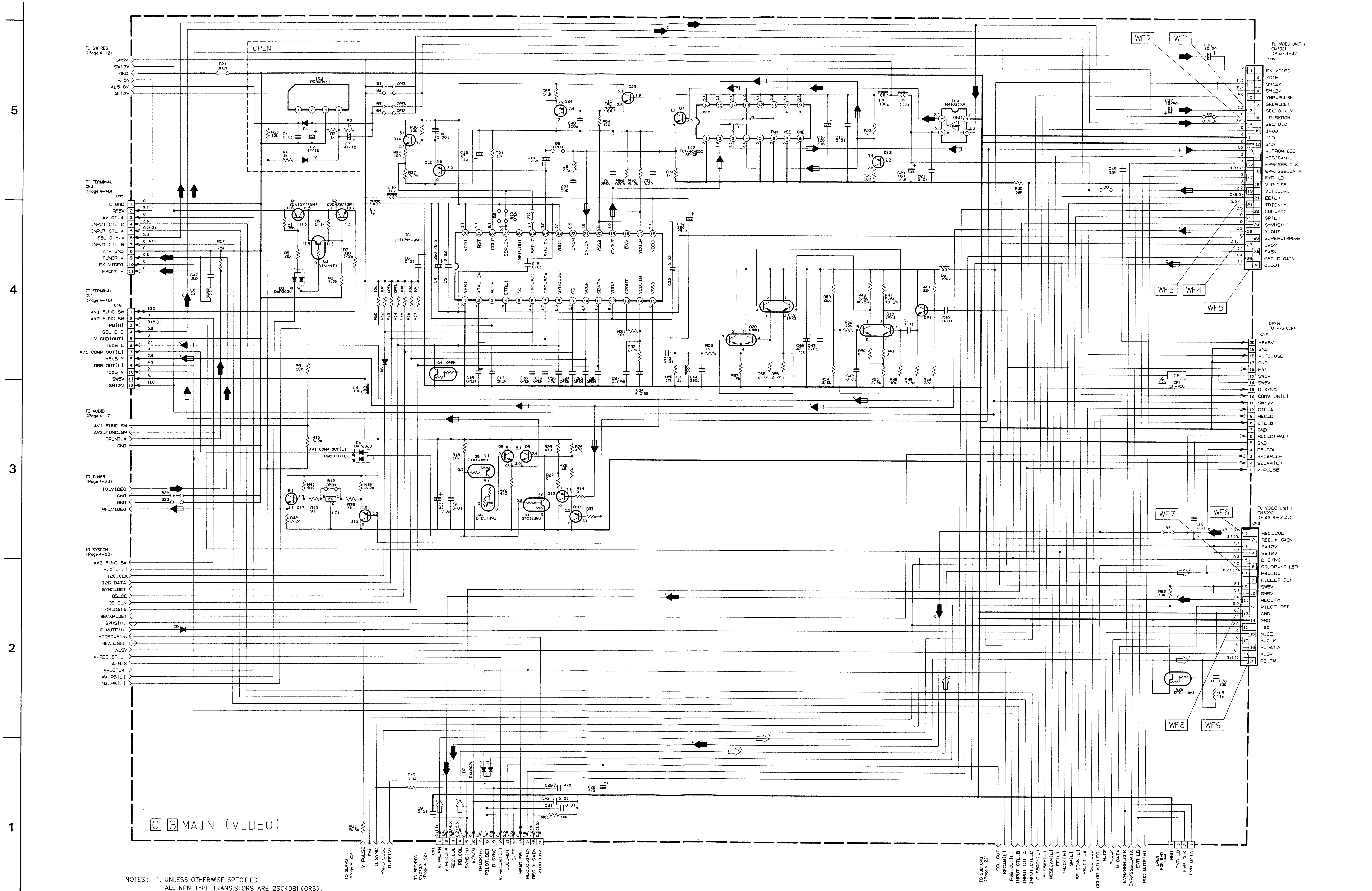
4.5 SWITCHING REGULATOR CIRCUIT BOARD


PRIMARY
F1
T1.25A
PB11001
SW REG PWB
0 1 PB11001
SW REG
PWB
LIVE
NEUTRAL
CN1
CN2
CN5
FC1
FC2
LF1
LF2
T1
PC1
Q1
Q2
Q51
K1
K2
K52
L51
L52
L53
VR1
VR2
UL MARK
A
B
C
1
2
3
4
5
6
7
8

COMPONENT PARTS LOCATION GUIDE < SW REGULATOR >

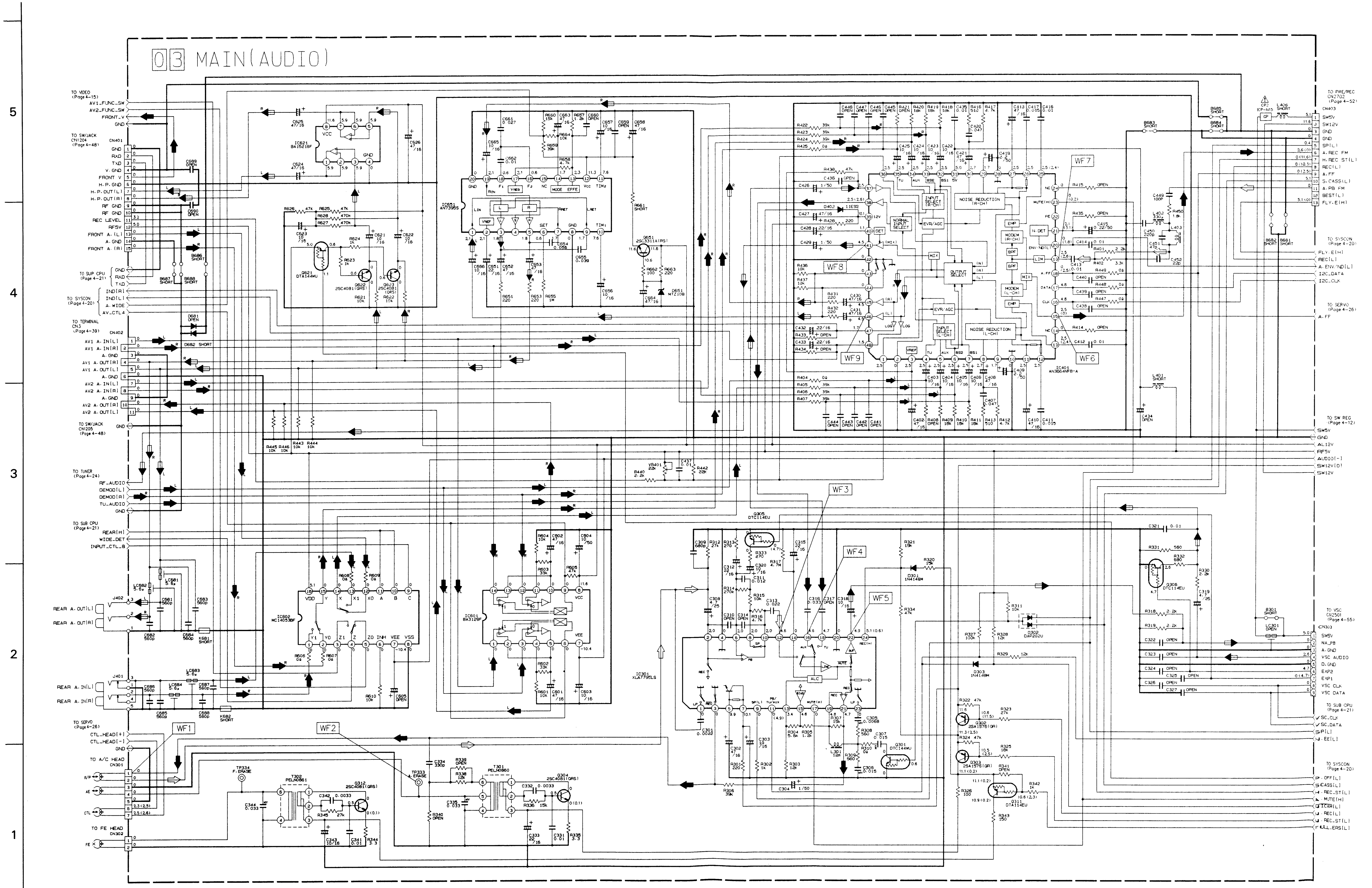
REF.NO.	LOCATION		
CAPACITOR			
C1	A	D	1B
C2	A	D	2A
C3	A	D	3B
C4	A	D	5A
C5	A	D	4B
C6	A	D	4A
C7	A	D	4B
C8	A	D	4A
C9	A	D	4B
C10	A	D	2B
C11	A	D	4B
C14	A	D	3A
C15	A	D	4A
C51	A	D	6A
C52	A	D	6B
C53	A	D	7A
C54	A	D	7B
C55	A	D	6B
C56	A	D	6B
C59	A	D	7B
C60	A	D	6A
C61	A	D	7A
C64	A	D	7B
C65	A	D	8A
C66	A	D	5A
C67	A	D	5A
CONNECTOR			
CN1	A	D	1A
CN2	A	D	7C
CN5	A	D	8B
DIODE			
D1	A	D	3B
D2	A	D	3B
D3	A	D	3A
D4	A	D	3A
D5	A	D	4A
D6	A	D	4B
D7	A	D	4B
D9	A	D	4A
D51	A	D	5B
D52	A	D	6B
D53	A	D	6A
D55	A	D	6B
D57	A	D	6A
D60	A	D	5C
D61	A	D	6A
D63	A	D	8A
D65	A	D	8B
D66	A	D	8A
D67	A	D	5A
COIL			
L51	A	D	7B
L52	A	D	7B
L53	A	D	7A
TRANSISTOR			
Q1	A	D	4B
Q2	A	D	3A
Q51	A	D	5A
RESISTOR			
R1	A	D	3B
R2	A	D	4B
R3	A	D	4B
R4	A	D	4B
R5	A	D	3A
R6	A	D	4A
R7	A	D	4A
R8	A	D	4B
R9	A	D	4B
R10	A	D	4A
R11	A	D	4A
R12	A	D	4B
R55	A	D	7C
R56	A	D	7A
R57	A	D	7A
R59	A	D	5A
R60	A	D	6A
R61	A	D	6A
R62	A	D	5A
R63	A	D	5A
R64	A	D	8A
OTHERS			
F1	A	D	2C
K1	A	D	4B
K2	A	D	4B
K52	A	D	6B
LF1	A	D	2B
LF2	A	D	2A
PC1	A	D	5A
T1	A	D	5A

4.6 VIDEO SCHEMATIC DIAGRAM


03 MAIN (VIDEO)
OPEN
TO SW REG (Page 4-12)
SW5V
SW12V
GND
RF5V
AL5.8V
AL12V
TO TERMINAL CN2 (Page 4-40)
C GND
RF5V
AV CTL4
INPUT CTL C
INPUT CTL A
SEL'D Y/V
INPUT CTL B
Y/V GND
TUNER V
EX VIDEO
FRONT V
TO TERMINAL CN1 (Page 4-40)
AV1 FUNC SW
AV2 FUNC SW
PB(H)
SEL'D C
V.GND(OUT)
+6dB C
AV1 COMP OUT(L)
+6dB Y
RGB OUT(L)
+6dB V
SW5V
SW12V
TO AUDIO (Page 4-17)
AV1_FUNC_SW
AV2_FUNC_SW
FRONT_V
GND
TO TUNER (Page 4-23)
TU_VIDEO
GND
GND
RF_VIDEO
TO SYSCON (Page 4-20)
AV2_FUNC_SW
P.CTL(L)
I2C_CLK
I2C_DATA
SYNC_DET
OS_CE
OS_CLK
OS_DATA
SECAM_DET
SVHS(H)
P.MUTE(H)
VIDEO_ENV.
HEAD_SEL
AL5V
V.REC_ST(L)
A/M/S
AV_CTL4
WA_PB(L)
NA_PB(L)
IC2 PQ30RV11
IC1 LC74795-9601
IC3 TC74HC4052 AF-XE
IC4 MM1031XM
TO VIDEO UNIT 1 CN3001 (PAGE 4-32) CN2
EX_VIDEO
YCTH
SW12V
SW12V
YNR_PULSE
SKEW_DET
SEL'D_Y/V
LP_SERCH
SEL'D_C
IROJ
GND
GND
V_FROM_OSD
MESECAM(L)
EVR/SSB_CLK
EVR/SSB_DATA
EVR_LD
V_PULSE
V_TO_OSD
EE(L)
TRICK(H)
COL_ROT
SP(L)
S-VHS(H)
Y_OUT
SUPER_IMPOSE
SW5V
SW5V
REC_C_GAIN
C_OUT
OPEN TO P/S CONV. CN7
+6dBV
GND
V_TO_OSD
GND
Fsc
SW5V
SW5V
D.SYNC
CONV.ON(L)
SW12V
CTL_A
REC_C
CTL_B
GND
REC_C(PAL)
GND
PB_COL
SECAM_DET
SECAM(L)
V PULSE
CP1 ICP-N20
TO VIDEO UNIT 1 CN3002 (PAGE 4-31,32) CN3
REC_COL
REC_Y_GAIN
SW12V
SW12V
D.SYNC
COLOR_KILLER
PB_COL
KILLER_DET
SW5V
SW5V
REC_FM
PILOT_DET
GND
GND
Fsc
M_CE
M_CLK
M_DATA
AL5V
PB_FM
WF1
WF2
WF3
WF4
WF5
WF6
WF7
WF8
WF9
TO SERVO (Page 4-15)
V.PULSE
Fsc
D.SYNC
YNR.PULSE
D.FF(V)
TO PRE/REC CN2703 (Page 4-52) CN1
V.PB_FM
V.REC_FM
REC_COL
PB_COL
SVHS(H)
TRICK(H)
PILOT_DET
D.SYNC
V.REC_ST(L)
COL_ROT
D.FF
HEAD_SEL
REC_C_GAIN
REC_Y_GAIN
VIDEO_ENV.
TO SUB CPU (Page 4-22)
COL_ROT
SECAM(L)
RGB_OUT(L)
INPUT_CTL_B
INPUT_CTL_A
INPUT_CTL_C
LP_SERCH(L)
R-YREV(L)
MESECAM(L)
EE(L)
TRICK(H)
SP(L)
SP_CONV(L)
PS_CTL_A
PS_CTL_B
COLOR_KILLER
M_CE
M_CLK
M_DATA
EVR/SSB_CLK
EVR/SSB_DATA
EVR_LD
POC_MUTE(H)
OPEN FOR EVR CN4
GND
EVR LD
EVR CLK
EVR DATA
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTES: 1. UNLESS OTHERWISE SPECIFIED.
ALL NPN TYPE TRANSISTORS ARE 2SC4081(QRS).
ALL PNP TYPE TRANSISTORS ARE 2SA1576(QR).
2. For VIDEO waveforms, please refer to 4-30.

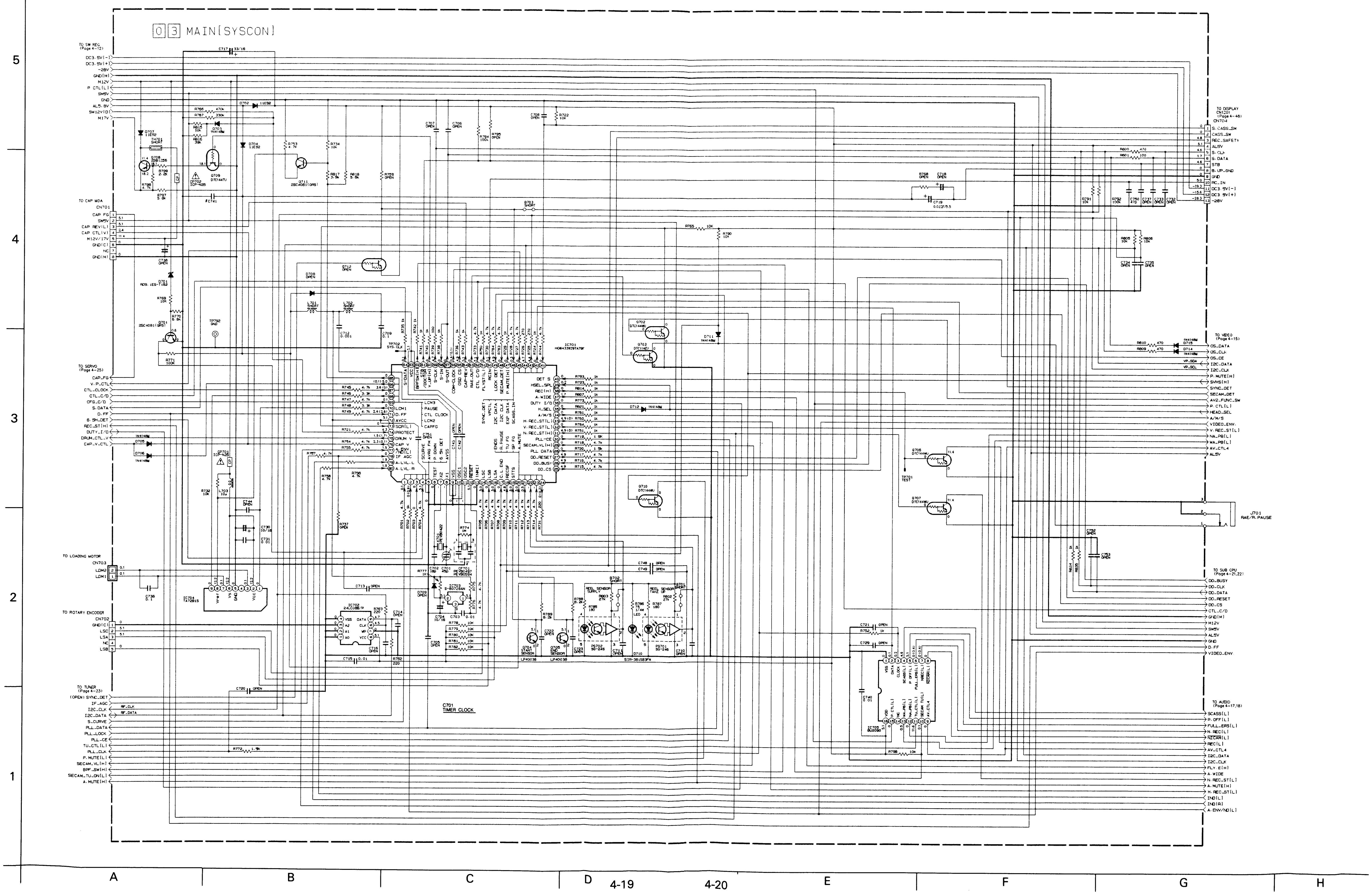
4.7 AUDIO SCHEMATIC DIAGRAM



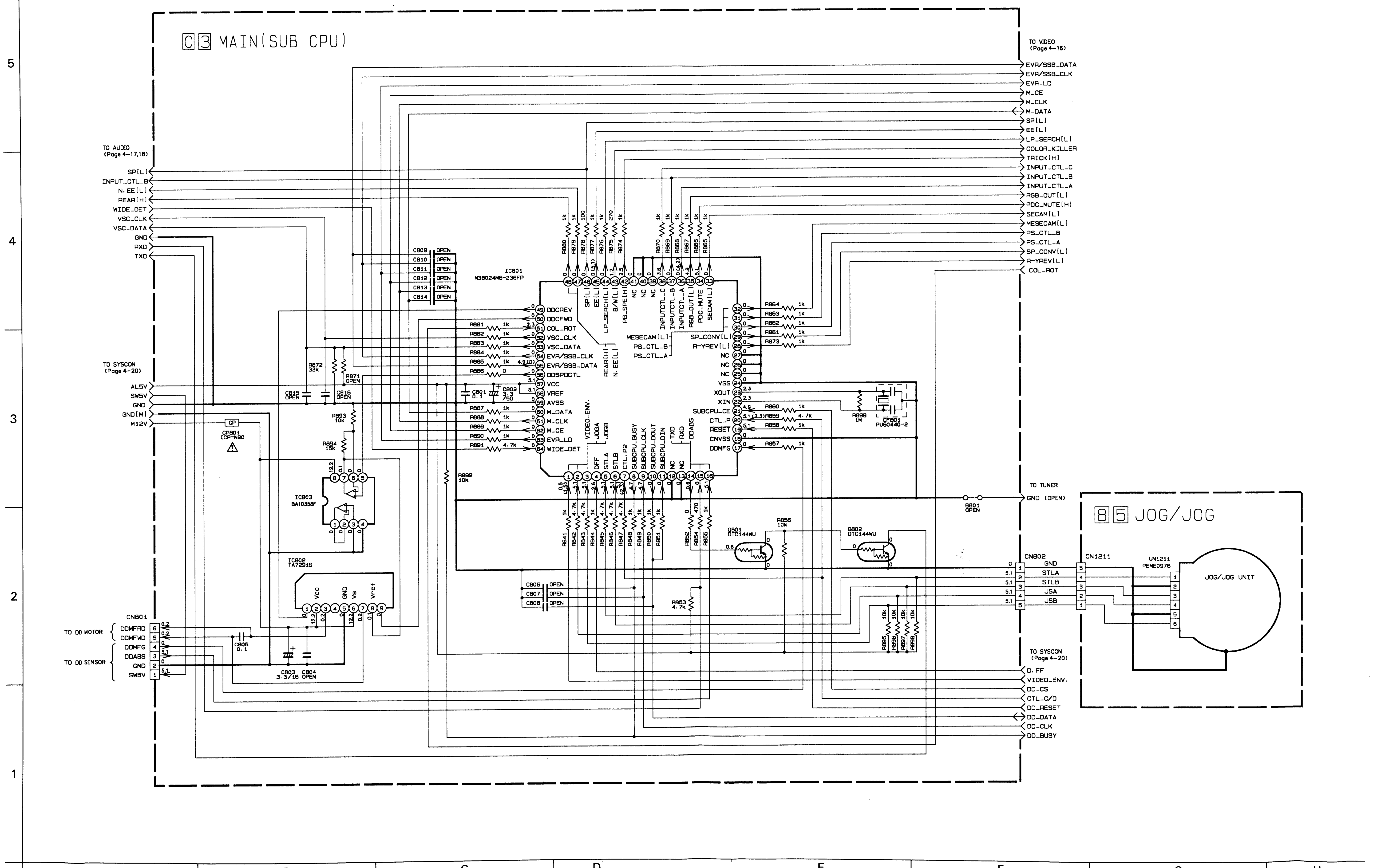
03 MAIN(AUDIO)
TO VIDEO (Page 4-15)
AV1_FUNC_SW
AV2_FUNC_SW
FRONT_V
GND
TO SW/JACK CN1204 (Page 4-48)
CN401
TO SUP CPU (Page 4-21)
TO SYSCON (Page 4-20)
TO TERMINAL CN3 (Page 4-39)
CN402
TO SW/JACK CN1205 (Page 4-48)
TO TUNER (Page 4-24)
RF_AUDIO
DEMOD(L)
DEMOD(R)
TU_AUDIO
TO SUB CPU (Page 4-21)
REAR(H)
WIDE_DET
INPUT_CTL_B
J402
REAR A. OUT(L)
REAR A. OUT(R)
J401
REAR A. IN(L)
REAR A. IN(R)
TO SERVO (Page 4-26)
CTL_HEAD(+)
CTL_HEAD(-)
TO A/C HEAD CN301
TO FE HEAD CN302
IC621 BA15218F
IC651 AN7395S
IC401 AN3664NFB-A
IC602 MC14053BF
IC601 BA3129F
IC301 XLA7795LS
T302 PELN0861
T301 PELN0860
TP334 F.ERASE
TP333 A.ERASE
NOISE REDUCTION (R-CH)
NOISE REDUCTION (L-CH)
INPUT SELECT
OUTPUT SELECT
EVR/AGC
WF1
WF2
WF3
WF4
WF5
WF6
WF7
WF8
WF9
TO PRE/REC CN2702 (Page 4-52)
CN403
TO SYSCON (Page 4-20)
TO SERVO (Page 4-26)
TO SW REG (Page 4-12)
TO VSC CN2501 (Page 4-55)
CN303
TO SUB CPU (Page 4-21)
TO SYSCON (Page 4-20)
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTE : For AUDIO waveforms, please refer to page 4-30.

4.8 SYSCON SCHEMATIC DIAGRAM

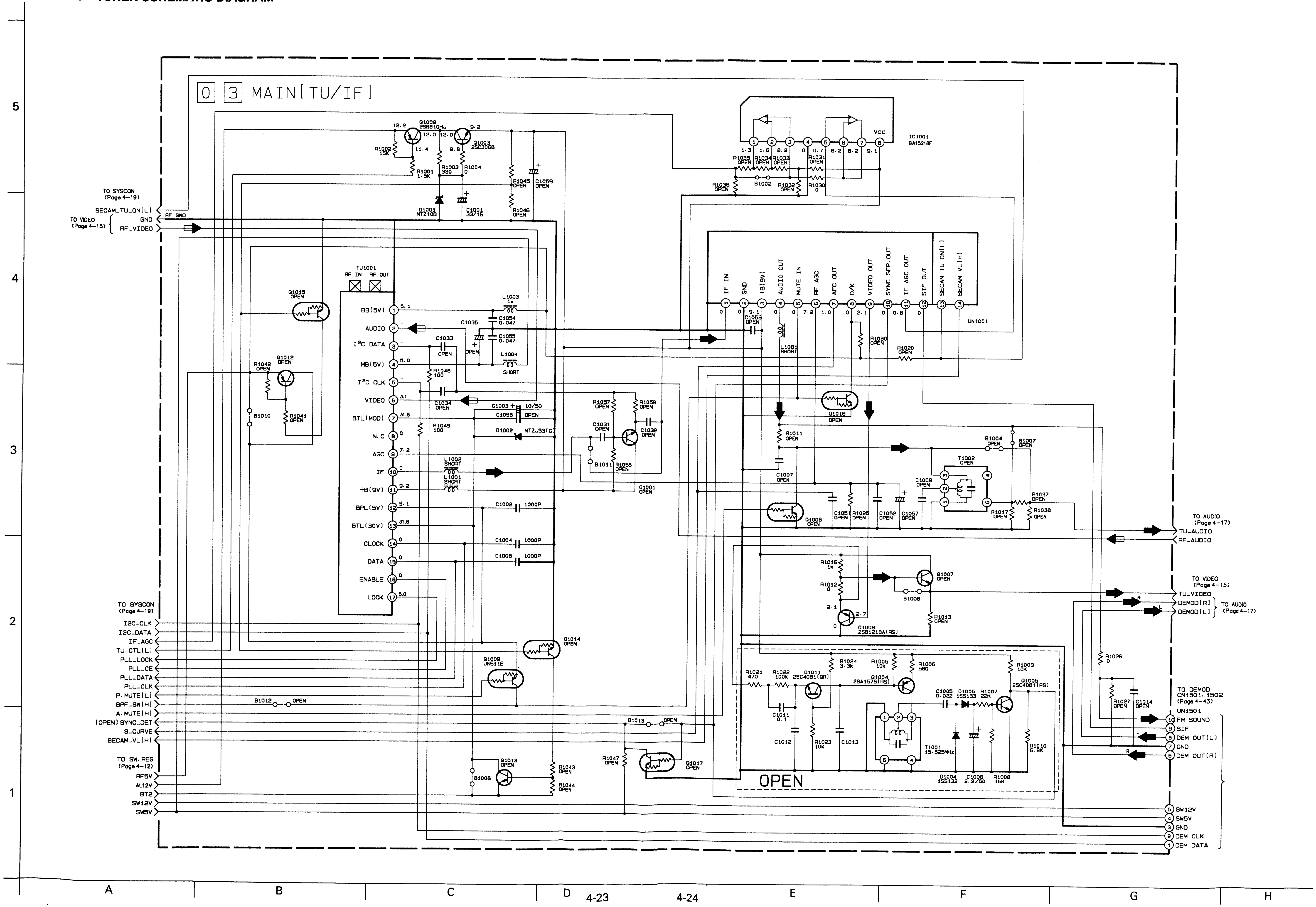

03 MAIN(SYSCON)
TO SW REG (Page 4-12)
DC3.5V(-)
DC3.5V(+)
-28V
GND(M)
M12V
P CTL(L)
SW5V
GND
AL5.8V
SW12V(D)
M17V
D707 11ES2
TH701 SHORT
Q708 2SB1256
R799 2.2k
R798 4.7k
R797 5.6k
CP702 ICP-N25
R815 10k
R816 39k
R766 470k
R767 330k
D701 1N4148M
Q709 DTC144TU
D702 11ES2
D704 11ES2
R753 4.7k
Q711 2SC4081(QRS)
R734 10k
R817 3.9k
R818 5.6k
R759 OPEN
C707 OPEN
C706 OPEN
R794 100k
R795 OPEN
C708 OPEN
R722 10k
C717 33/16
TO CAP MDA
CN701
CAP FG
SW5V
CAP REV(L)
CAP CTL(V)
M12V/17V
GND(C)
NC
GND(M)
C738 OPEN
D701 RD9.1ES-T1B2
R769 10K
R770 6.8K
Q701 2SC4081(QRS)
R771 100K
TP792 GND
D708 OPEN
Q712 OPEN
L701 SHORT
L702 SHORT
C712 0.001
C709 0.1
TP702 SYS.CLK
R703 SHORT
R765 10K
R790 10K
Q702 DTC144WU
Q703 DTC114EU
D711 1N4148M
D712 1N4148M
IC701 HD6433929TA79F
S-DATA
VCC
BOFSW(H)
STB /DOCTOR
V_UP(H)
S-CLK
S-IN
S-OUT
COM-CLOCK
OSD CS
CAP-REV
RAE_OUT
CTL C/D
FLYST(L)
RCIN
LOCK DET
SECAM_DET
P.MUTE(H)
DET S
HSEL_SPL
REC(H)
A.WIDE
DUTY I/O
H_SEL
A/M/S
H.REC_ST(L)
V.REC_ST(L)
N.REC_ST(H)
PLL-CE
SECAM_VL(H)
PLL DATA
DD_RESET
DD_BUSY
DD_CS
LCM1
D.FF
AVCC
SCR(L)
PROTECT
DRUM V
CAP V
A.ENV /ND(L)
IF AGC
A.LVL.L
A.LVL.R
LCM3
PAUSE
CTL CLOCK
LCM2
CAPFG
SCURVE
AVRG FM
P.DOWN
6.5H DET
AVSS
SYNC_DET
VPCTL
I2C DATA
I2C CLK
EXP DATA
SCASS_IN
ENDS
R.PAUSE
TU FG
SP FG
A.MUTE
TEST
X2
X1
VSS
OSC1
OSC2
RESET (NMI)
LSC
LSB
LSA
C.L.END
RECSF
STTS
C751 OPEN
C743 OPEN
C742 OPEN
X701 PEVB0422
R774 1M
CF701 PEVB0497 PEVB0594
R737 OPEN
R756 4.7k
R758 4.7k
R757 4.7k
TO SERVO (Page 4-25)
CAP_FG
V.P_CTL
CTL_CLOCK
CTL_C/D
CFG_C/D
S.DATA
D.FF
6.5H_DET
REC_ST(H)
DUTY_I/O
DRUM_CTL_V
CAP_V_CTL
D705 1N4148M
D706 1N4148M
CP701 ICP-N25
R732 10k
L703 10μ
C744 OPEN
C730 10/16
C731 0.01
TO LOADING MOTOR
CN703
LDM2
LDM1
C736 0.1
IC704 TA7291S
TO ROTARY ENCODER
CN702
GND(C)
LSC
LSA
NC
LSB
IC702 24C08B/P
VSS
A2
A1
A0
DATA
CLK
WP
VCC
R763 220
C714 OPEN
C716 OPEN
C715 0.01
R762 220
C713 OPEN
C702 180
C701 450
R777 1K
D709 OPEN
IC703 S-80728AN
C704 10/16
C703 0.01
C705 OPEN
R778 10K
R775 10K
R780 10K
R781 10K
R782 10K
C701 TIMER CLOCK
C720 OPEN
R772 1.5K
TO TUNER (Page 4-23)
(OPEN) SYNC_DET
IF_AGC
I2C_CLK
I2C_DATA
RF_CLK
RF_DATA
S_CURVE
PLL_DATA
PLL_LOCK
PLL_CE
TU_CTL(L)
PLL_CLK
P.MUTE(L)
SECAM_VL(H)
BPF_SW(H)
SECAM_TU_ON(L)
A.MUTE(H)
C748 OPEN
C749 OPEN
R789 8.2k
Q704 START SENSOR LP4003B
Q705 END SENSOR LP4003B
C722 OPEN
C723 OPEN
C711 OPEN
R788 8.2k
REEL SENSOR SUPPLY
R785 180
R803 27k
PS702 SG-246
D710 SIR-381SB3FN
LED
R786 17.4k
R787 180
REEL SENSOR TAKE UP
R802 27k
R701 SHORT
PS701 SG-246
C710 OPEN
TO DISPLAY CN1201 (Page 4-48)
CN704
S.CASS_SW
CASS_SW
REC_SAFETY
AL5V
S.CLK
S.DATA
STB
B.UP_GND
GND
RC_IN
DC3.5V(-)
DC3.5V(+)
-28V
R800 470
R801 100
R768 OPEN
C718 OPEN
C719 0.022/5.5
R791 10k
R792 100k
C750 470
C737 OPEN
C733 OPEN
C732 OPEN
R805 10k
R806 10k
C734 OPEN
C735 OPEN
TO VIDEO (Page 4-15)
R810 470
R809 470
D715 1N4148M
D714 1N4148M
OS_DATA
OS_CLK
OS_CE
VP_SDA
VP_SCL
I2C_DATA
I2C_CLK
P.MUTE(H)
SVHS(H)
SYNC_DET
SECAM_DET
AV2_FUNC_SW
P.CTL(L)
HEAD_SEL
A/M/S
VIDEO_ENV.
V.REC_ST(L)
NA_PB(L)
WA_PB(L)
AV_CTL4
AL5V
Q706 DTC144WU
TP701 TEST
Q710 DTC144WU
Q707 DTC144WU
J701 RAE/R.PAUSE
C752 OPEN
R834 1k
R835 1k
C753 OPEN
TO SUB CPU (Page 4-21,22)
DD_BUSY
DD_CLK
DD_DATA
DD_RESET
DD_CS
CTL_C/D
GND(M)
M12V
SW5V
AL5V
GND
D.FF
VIDEO_ENV.
C721 OPEN
R752 1K
C729 OPEN
C740 0.01
IC705 BU2090
VSS
DATA
CLOCK
SCASS(L)
P.OFF(L)
FULL_ERS(L)
N.REC(L)
NICAM(L)
VDD
NC
NA_PB(L)
WA_PB(L)
SECAM TU(L)
AV_CTL4
R798 10K
TO AUDIO (Page 4-17,18)
SCASS(L)
P.OFF(L)
FULL_ERS(L)
N.REC(L)
NICAM(L)
REC(L)
AV_CTL4
I2C_DATA
I2C_CLK
FLY.E(H)
A.WIDE
N.REC_ST(L)
A.MUTE(H)
H.REC_ST(L)
IND(L)
IND(R)
A.ENV/ND(L)
5
4
3
2
1
A
B
C
D
E
F
G
H

4.9 SUB CPU SCHEMATIC DIAGRAM

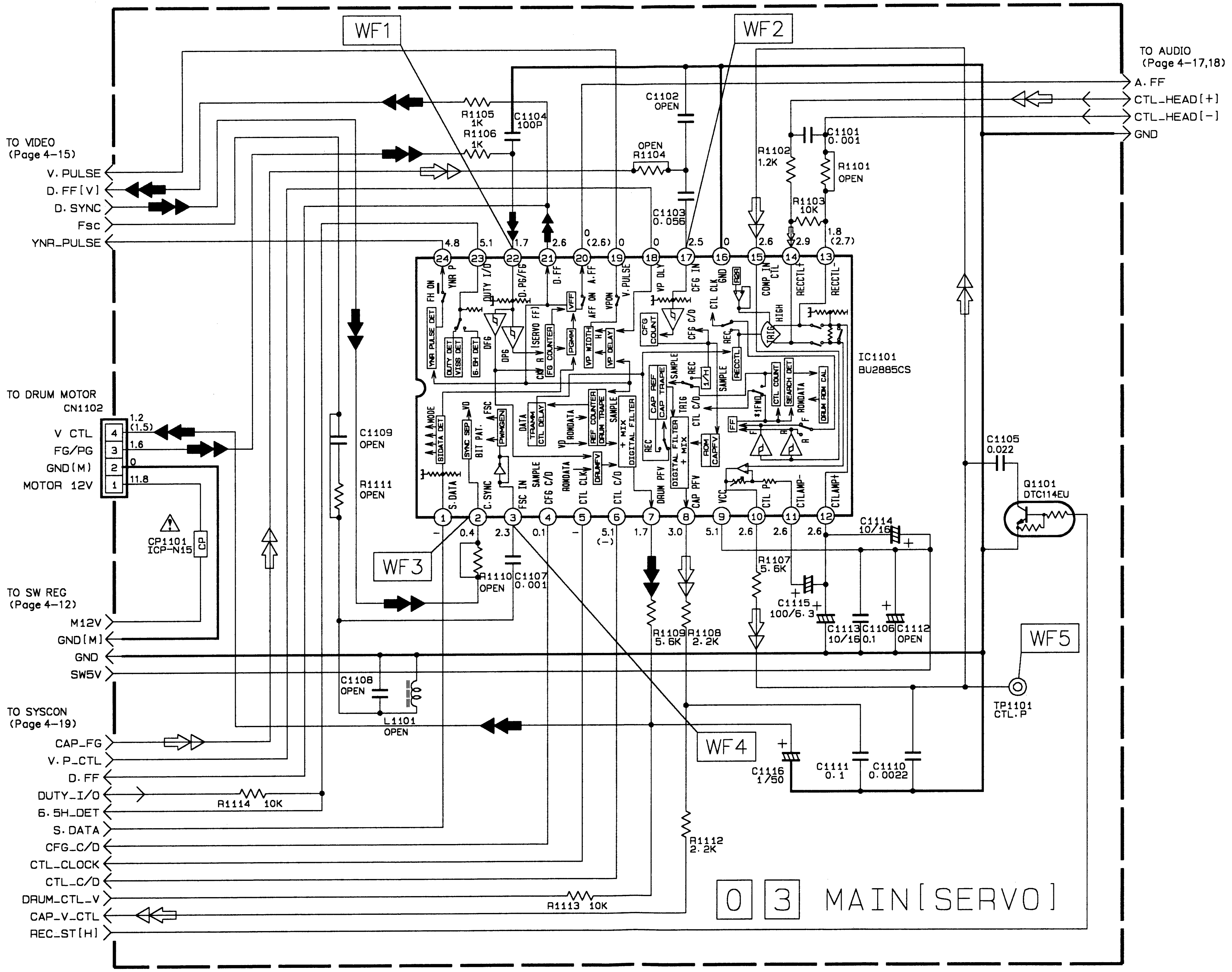


03 MAIN(SUB CPU)
85 JOG/JOG
TO VIDEO (Page 4-16)
EVR/SSB_DATA
EVR/SSB_CLK
EVR_LD
M_CE
M_CLK
M_DATA
SP[L]
EE[L]
LP_SERCH[L]
COLOR_KILLER
TRICK[H]
INPUT_CTL_C
INPUT_CTL_B
INPUT_CTL_A
RGB_OUT[L]
PDC_MUTE[H]
SECAM[L]
MESECAM[L]
PS_CTL_B
PS_CTL_A
SP_CONV[L]
R-YREV[L]
COL_ROT
TO AUDIO (Page 4-17,18)
SP[L]
INPUT_CTL_B
N.EE[L]
REAR[H]
WIDE_DET
VSC_CLK
VSC_DATA
GND
RXD
TXD
TO SYSCON (Page 4-20)
AL5V
SW5V
GND
GND[M]
M12V
IC801
M38024M6-236FP
DDCREV
DDCFWD
COL_ROT
VSC_CLK
VSC_DATA
EVR/SSB_CLK
EVR/SSB_DATA
DDSPDCTL
VCC
VREF
AVSS
M_DATA
M_CLK
M_CE
EVR_LD
WIDE_DET
VSS
XOUT
XIN
SUBCPU_CE
CTL_P
RESET
CNVSS
DDMFG
SP_CONV[L]
R-YREV[L]
MESECAM[L]
PS_CTL_B
PS_CTL_A
NC
REAR[H]
N.EE[L]
VIDEO_ENV.
JOGA
JOGB
DFF
STLA
STLB
CTL_P2
SUBCPU_BUSY
SUBCPU_CLK
SUBCPU_DOUT
SUBCPU_DIN
TXD
RXD
DDABS
INPUTCTL_C
INPUTCTL_B
INPUTCTL_A
RGB_OUT[L]
PDC_MUTE
SECAM[L]
LP_SERCH[L]
B/W[L]
PB_SPE[H]
C809 OPEN
C810 OPEN
C811 OPEN
C812 OPEN
C813 OPEN
C814 OPEN
R881 1k
R882 1k
R883 1k
R884 1k
R885 1k
R886 0
R887 1k
R888 1k
R889 1k
R890 1k
R891 4.7k
R872 33k
R871 OPEN
C815 OPEN
C816 OPEN
C801 0.1
C802 3.3/50
R893 10k
R894 15k
R892 10k
CP801 ICP-N20
IC803 BA10358F
IC802 TA7291S
Vcc
GND
Vs
Vref
CN801
TO DD MOTOR
DDMFRD
DDMFWD
TO DD SENSOR
DDMFG
DDABS
GND
SW5V
C805 0.1
C803 3.3/16
C804 OPEN
C806 OPEN
C807 OPEN
C808 OPEN
R880 R879 R878 R877 R876 R875 R874
R870 R869 R868 R867 R866 R865
R864 1k
R863 1k
R862 1k
R861 1k
R873 1k
R860 1k
R859 4.7k
R858 1k
R857 1k
R899 1M
CF801 PU60440-2
R841 R842 R843 R844 R845 R846 R847 R848 R849 R850 R851
R852 R854 R855
R853 4.7k
R856 10k
Q801 DTC144WU
Q802 DTC144WU
R895 R896 R897 R898 10k
TO TUNER
GND (OPEN)
R801 OPEN
CN802
GND
STLA
STLB
JSA
JSB
CN1211
UN1211 PEME0976
JOG/JOG UNIT
TO SYSCON (Page 4-20)
D.FF
VIDEO_ENV.
DD_CS
CTL_C/D
DD_RESET
DD_DATA
DD_CLK
DD_BUSY
A B C D E F G H
1 2 3 4 5

4.10 TUNER SCHEMATIC DIAGRAM

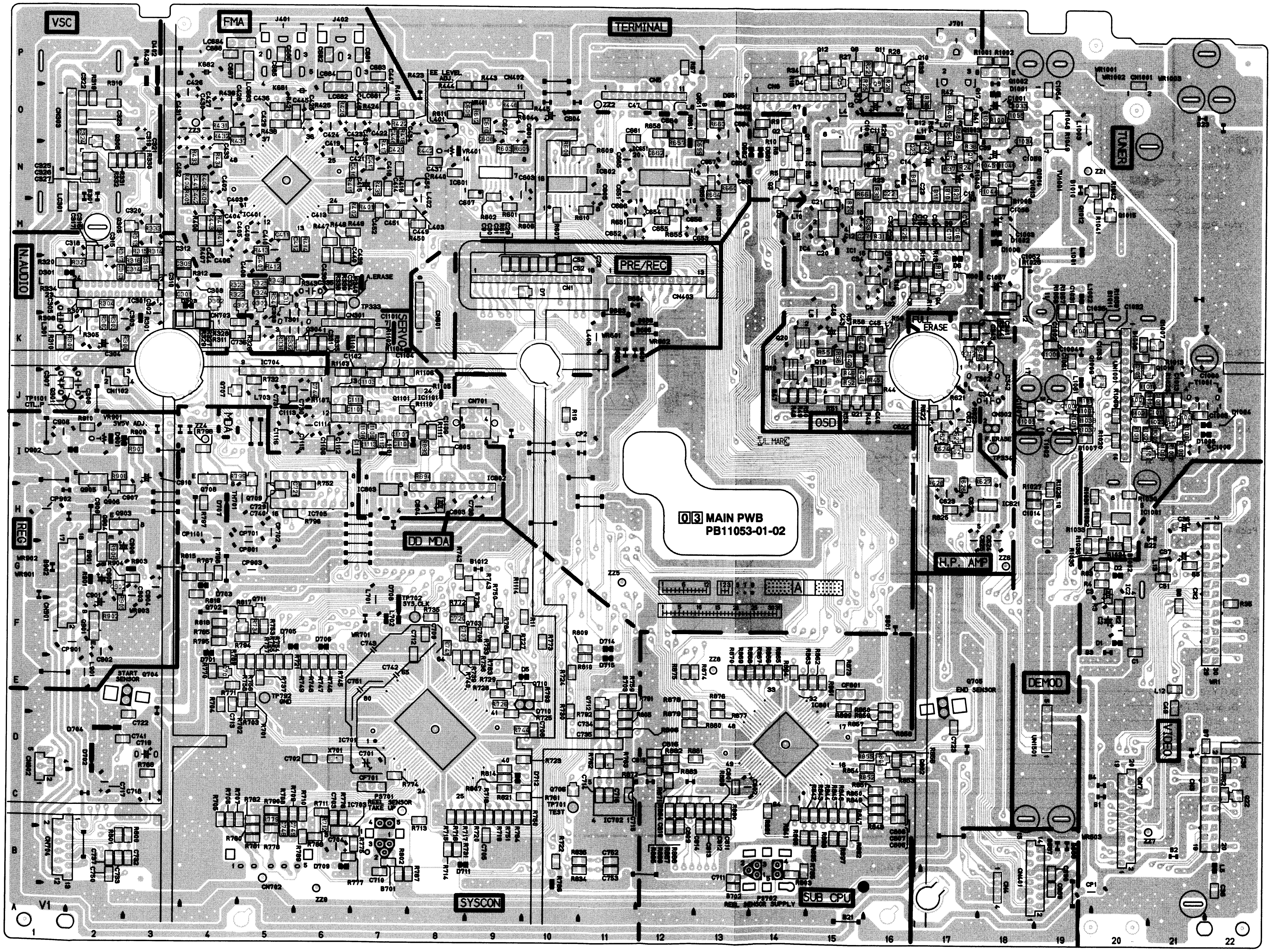

03 MAIN[TU/IF]
TO SYSCON (Page 4-19)
SECAM_TU_ON[L]
TO VIDEO (Page 4-15)
GND
RF_VIDEO
RF GND
TU1001
RF IN RF OUT
BB(5V)
AUDIO
I²C DATA
MB(5V)
I²C CLK
VIDEO
BTL(MOD)
N.C
AGC
IF
+B(9V)
BPL(5V)
BTL(30V)
CLOCK
DATA
ENABLE
LOCK
Q1002 2SB810HJ
Q1003 2SC3068
R1002 15K
R1001 1.5K
R1003 330
R1004 0
D1001 MTZ10B
C1001 33/16
R1045 OPEN
R1046 OPEN
C1059 OPEN
L1003 1μ
C1054 0.047
C1055 0.047
C1035
L1004 SHORT
C1033 OPEN
R1048 100
C1034 OPEN
R1049 100
C1003 10/50
C1058 OPEN
D1002 MTZJ33[C]
L1002 SHORT
L1001 SHORT
C1002 1000P
C1004 1000P
C1008 1000P
Q1015 OPEN
Q1012 OPEN
R1042 OPEN
B1010
R1041 OPEN
R1057 OPEN
R1059 OPEN
C1031 OPEN
C1032 OPEN
B1011
R1058 OPEN
Q1001 OPEN
IC1001 BA15218F
Vcc
R1035 OPEN
R1034 OPEN
R1033 OPEN
R1031 OPEN
R1036 OPEN
B1002
R1032 OPEN
R1030 0
IF IN
GND
+B(9V)
AUDIO OUT
MUTE IN
RF AGC
AFC OUT
D/K
VIDEO OUT
SYNC SEP. OUT
IF AGC OUT
SIF OUT
SECAM TU ON(L)
SECAM VL(H)
UN1001
C1053 OPEN
L1081 SHORT
R1050 OPEN
R1020 OPEN
Q1016 OPEN
R1011 OPEN
C1007 OPEN
B1004 OPEN
B1007 OPEN
T1002 OPEN
C1009 OPEN
R1037 OPEN
R1038 OPEN
R1017 OPEN
C1051 OPEN
R1025 OPEN
C1052 OPEN
C1057 OPEN
Q1006 OPEN
TO AUDIO (Page 4-17)
TU_AUDIO
RF_AUDIO
R1016 1k
R1012 0
Q1007 OPEN
B1006
Q1008 2SB1218A(RS)
R1013 OPEN
TO VIDEO (Page 4-15)
TU_VIDEO
DEMOD(R)
DEMOD(L)
TO AUDIO (Page 4-17)
R1024 3.3k
R1005 10k
R1006 560
R1009 10K
R1021 470
R1022 100k
Q1011 2SC4081(QR)
Q1004 2SA1576(RS)
Q1005 2SC4081(RS)
C1005 0.022
D1005 1SS133
R1007 22K
C1011 0.1
C1012
R1023 10k
C1013
T1001 15.625MHz
R1010 6.8K
D1004 1SS133
C1006 2.2/50
R1008 15K
OPEN
R1026 0
R1027 OPEN
C1014 OPEN
TO DEMOD CN1501·1502 (Page 4-43)
UN1501
FM SOUND
SIF
DEM OUT(L)
GND
DEM OUT(R)
SW12V
SW5V
GND
DEM CLK
DEM DATA
TO SYSCON (Page 4-19)
I2C_CLK
I2C_DATA
IF_AGC
TU_CTL[L]
PLL_LOCK
PLL_CE
PLL_DATA
PLL_CLK
P.MUTE[L]
BPF_SW[H]
A.MUTE[H]
(OPEN) SYNC_DET
S_CURVE
SECAM_VL[H]
TO SW.REG (Page 4-12)
RF5V
AL12V
BT2
SW12V
SW5V
Q1014 OPEN
Q1009 UN511E
B1012 OPEN
B1013 OPEN
Q1013 OPEN
B1008
R1043 OPEN
R1044 OPEN
R1047 OPEN
Q1017 OPEN
A
B
C
D
E
F
G
H
1
2
3
4
5

4.11 SERVO SCHEMATIC DIAGRAM


TO VIDEO
(Page 4-15)
V. PULSE
D. FF[V]
D. SYNC
Fsc
YNR_PULSE
TO DRUM MOTOR
CN1102
V CTL
FG/PG
GND[M]
MOTOR 12V
CP1101
ICP-N15
TO SW REG
(Page 4-12)
M12V
GND[M]
GND
SW5V
TO SYSCON
(Page 4-19)
CAP_FG
V.P_CTL
D.FF
DUTY_I/O
6.5H_DET
S.DATA
CFG_C/D
CTL_CLOCK
CTL_C/D
DRUM_CTL_V
CAP_V_CTL
REC_ST[H]
TO AUDIO
(Page 4-17,18)
A.FF
CTL_HEAD[+]
CTL_HEAD[-]
GND
WF1
WF2
WF3
WF4
WF5
R1105 1K
R1106 1K
C1104 100P
C1102 OPEN
OPEN R1104
C1103 0.056
C1101 0.001
R1102 1.2K
R1101 OPEN
R1103 10K
IC1101
BU2885CS
C1109 OPEN
R1111 OPEN
R1110 OPEN
C1107 0.001
C1108 OPEN
L1101 OPEN
R1114 10K
R1113 10K
R1112 2.2K
R1109 5.6K
R1108 2.2K
R1107 5.6K
C1115 100/6.3
C1114 10/16
C1113 10/16
C1106 0.1
C1112 OPEN
C1105 0.022
Q1101
DTC114EU
TP1101
CTL.P
C1116 1/50
C1111 0.1
C1110 0.0022
S.DATA
C.SYNC
FSC IN
CFG C/O
CTL CLK
CTL C/O
DRUM PFV
CAP PFV
VCC
CTL P
CTLAMP-
CTLAMP+
FH ON
YNR P
DUTY I/O
D.PG/FG
D.FF
A.FF
V.PULSE
VP DLY
CFG IN
CTL CLK
GND
COMP IN
CTL
RECCTL+
RECCTL-
4.8
5.1
1.7
2.6
0
(2.6)
2.5
2.9
1.8
(2.7)
0.4
2.3
0.1
-
5.1
(-)
3.0
1.2
(1.5)
1.6
11.8
03 MAIN[SERVO]

NOTE: For SERVO waveforms, please refer to page 4-30.

4.12 MAIN AND A/C HEAD CIRCUIT BOARDS


VSC
FMA
TERMINAL
N.AUDIO
PRE/REC
SERVO
MDA
REG
DD MDA
03 MAIN PWB
PB11053-01-02
UL MARK
OSD
FULL ERASE
H.P. AMP
TUNER
DEMOD
VIDEO
SUB CPU
SYSCON
START SENSOR
END SENSOR
REEL SENSOR SUPPLY
TAKE UP REEL SENSOR
J701
J401
J402
CN1
V1
P
O
N
M
L
K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
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14
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16
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18
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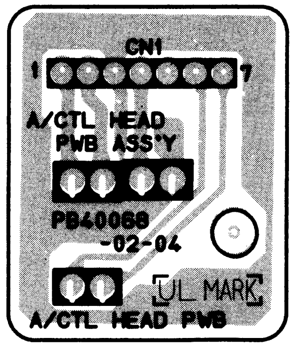
20
21
22

— A/C HEAD —


CN1
1
7
A/CTL HEAD
PWB ASS'Y
PB40069
-02-04
UL MARK
A/CTL HEAD PWB

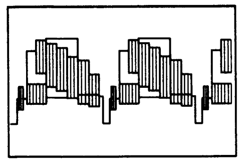
COMPONENT PARTS LOCATION GUIDE <MAIN>

REF.NO.	LOCATION		
CAPACITOR			
C1	B	C	20F
C2	A	D	20F
C3	A	D	20G
C4	A	D	16L
C5	B	C	16M
C6	B	C	16L
C7	A	D	15O
C8	B	C	16O
C9	B	C	9L
C10	A	D	16N
C11	B	C	16N
C12	A	D	15M
C13	A	D	17N
C14	A	D	17N
C15	B	C	17M
C16	B	C	17M
C17	B	C	17M
C18	B	C	17M
C19	B	C	16M
C20	A	D	15M
C21	B	C	15N
C22	B	C	16N
C23	B	C	16N
C24	B	C	16M
C25	B	C	16M
C26	B	C	16M
C27	B	C	15M
C28	B	C	10L
C29	B	C	10L
C30	B	C	9L
C31	B	C	9L
C32	B	C	16M
C33	B	C	16M
C34	A	D	16L
C35	B	C	22D
C36	A	D	21H
C37	A	D	21G
C38	B	C	22B
C39	B	C	17O
C40	B	C	16J
C41	B	C	15J
C42	B	C	15K
C43	B	C	15K
C44	B	C	15K
C45	B	C	16K
C46	A	D	15K
C47	B	C	12O
C48	B	C	17O
C49	B	C	21E
C50	B	C	17M
C51	B	C	21G
C52	B	C	10L
C53	B	C	10L
C301	B	C	4L
C302	A	D	3L
C303	A	D	2K
C304	A	D	2K
C305	A	D	1K
C306	A	D	2J
C307	A	D	1J
C308	A	D	4L
C309	B	C	4L
C310	B	C	3L
C311	B	C	3L
C312	A	D	3M
C313	B	C	2L
C314	B	C	3L
C315	A	D	2L
C316	B	C	2M
C317	B	C	2M
C318	A	D	2M
C319	A	D	3O
C320	A	D	3M
C321	B	C	3N
C322	B	C	2O
C323	B	C	2O
C324	B	C	2O
C325	B	C	2N
C326	B	C	2N
C327	B	C	2N
C331	B	C	6K
C332	B	C	5K
C333	A	D	5K
C334	B	C	6L
C335	A	D	6L
C341	B	C	17K
C342	B	C	18K
C343	A	D	18K
C344	A	D	17J
C402	A	D	4N
C403	A	D	4M
C404	A	D	4M
C405	A	D	4M
C406	A	D	4M
C407	B	C	5L
C408	A	D	5M
C409	A	D	5M
C410	A	D	5M
C411	B	C	5M
C412	B	C	5M
C413	B	C	6M
C414	B	C	7N
C415	A	D	7N
C416	B	C	6N
C417	B	C	7N
C418	A	D	7N
C419	A	D	6N
C420	B	C	7N
C421	A	D	7N
C422	A	D	7O
C423	A	D	6O
C424	A	D	6O
C425	A	D	6O
C426	A	D	4O
C427	A	D	4O
C428	A	D	4O
C429	A	D	5O
C430	A	D	4O
C431	A	D	4O
C432	A	D	4N
C433	A	D	4N
C434	A	D	8O
C435	B	C	6N
C436	B	C	5O
C437	B	C	8N
C438	B	C	6M
C439	B	C	6M
C440	B	C	6M
C441	B	C	4N
C442	B	C	4N
C443	B	C	4M
C444	B	C	4M
C445	B	C	5O
C446	B	C	6O
C447	B	C	7O
C448	B	C	7O
C449	B	C	8M
C450	B	C	7N
C451	B	C	7M
C452	B	C	7M
C601	A	D	9O
C602	A	D	9O
C603	A	D	10N
C604	A	D	10O
C605	A	D	11N
C607	B	C	9N
C608	B	C	9O
C609	B	C	8O
C610	B	C	9O
C621	A	D	17J
C622	A	D	17J
C623	A	D	17H
C624	A	D	18H
C625	A	D	17H
C626	A	D	17H
C651	A	D	11N
C652	A	D	12M
C653	A	D	12M
C654	B	C	12M
C655	B	C	12M
C656	A	D	12M
C657	A	D	13N
C658	A	D	13N
C659	B	C	13N
C660	B	C	12O
C661	B	C	11O
C662	B	C	12N
C663	A	D	13N
C664	A	D	13O
C665	A	D	11N
C666	A	D	12M
C681	B	C	7P
C682	B	C	6P
C683	B	C	7P
C684	B	C	6P
C685	B	C	5P
C686	B	C	5P
C687	B	C	4P
C688	B	C	4P
C689	B	C	19B
C690	B	C	19B
C701	A	D	7D
C702	B	C	6D
C703	B	C	6C
C704	A	D	6B
C705	B	C	9B
C706	B	C	9F
C707	B	C	8F
C708	B	C	10D
C709	B	C	8F
C710	B	C	7B
C711	B	C	13B
C712	B	C	8F
C713	B	C	4E
C714	B	C	11C
C715	B	C	11C
C716	B	C	11C
C717	A	D	2C
C718	A	D	3C
C719	A	D	3D
C720	B	C	8F
C721	B	C	5H
C722	B	C	3D
C723	B	C	17D
C729	B	C	5I
C730	A	D	6J
C731	B	C	5J
C732	B	C	3B
C733	B	C	2B
C734	B	C	11D
C735	B	C	11D
C736	B	C	4K
C737	B	C	2B
C738	A	D	9H
C740	B	C	5H
C741	B	C	2D
C742	A	D	8F
C743	A	D	8F
C744	B	C	6J
C748	B	C	5B
C749	B	C	5B
C750	B	C	2B
C751	A	D	7D
C752	B	C	11B
C753	B	C	11B
C801	B	C	13C
C802	A	D	13C
C803	A	D	8H
C804	B	C	8H
C805	B	C	8I
C806	B	C	16C
C807	B	C	16C
C808	B	C	16C
C809	B	C	12C
C810	B	C	12C
C811	B	C	13C
C812	B	C	13C
C813	B	C	13C
C814	B	C	13C
C815	B	C	12D
C816	B	C	12D
C901	A	D	2F
C902	A	D	2F
C903	A	D	3G
C904	A	D	3G
C905	A	D	2G
C906	A	D	2H
C907	B	C	3H
C908	A	D	1I
C909	B	C	2H
C910	A	D	3I
C1001	A	D	18O
C1002	B	C	19K
C1003	A	D	18M
C1004	B	C	19K
C1005	B	C	21J
C1006	A	D	21I
C1007	B	C	18J
C1008	B	C	19K
C1009	B	C	18J
C1011	B	C	21J
C1012	B	C	21J
C1013	B	C	21J
C1014	B	C	18H
C1031	B	C	19L
C1032	B	C	20K
C1033	B	C	18O
C1034	B	C	18O
C1036	B	C	19L
C1051	B	C	20K
C1052	B	C	18L
C1053	B	C	20K
C1054	B	C	19P
C1055	B	C	18O
C1057	A	D	18L
C1058	B	C	18M
C1059	A	D	18N
C1060	A	D	21K
C1061	B	C	19K
C1101	B	C	7K
C1102	B	C	7J
C1103	B	C	7J
C1104	B	C	7J
C1105	B	C	7J
C1106	B	C	6I
C1107	B	C	7I
C1108	B	C	7I
C1109	B	C	8I
C1110	B	C	7J
C1111	B	C	7I
C1112	A	D	6I
C1113	A	D	5J
C1114	A	D	6I
C1115	A	D	6J
C1116	A	D	5I
CONNECTOR			
CN1	A	D	9L
CN2	A	D	22H
CN3	A	D	22D
CN4	A	D	18B
CN5	A	D	11O
CN6	A	D	14O
CN7	A	D	20B
CN301	A	D	6K
CN302	A	D	18J
CN303	A	D	2O
CN401	A	D	18A
CN402	A	D	8O
CN403	A	D	11L
CN701	A	D	8J
CN702	A	D	5B
CN703	A	D	4K
CN704	A	D	2C
CN801	A	D	8K
CN802	A	D	1C
CN901	A	D	1F
CN1001	A	D	20P
CN1102	A	D	2J
CP			
CP1	A	D	19A
CP2	A	D	10I
CP701	A	D	5H
CP702	A	D	5H
CP801	A	D	5H
CP901	A	D	1F
CP902	A	D	1H
CP903	A	D	5G
CP1101	A	D	4H
DIODE			
D1	A	D	20F
D2	A	D	20G
D3	B	C	14N
D4	B	C	15P
D5	A	D	9E
D6	A	D	17M
D7	B	C	10L
D301	A	D	1L
D302	B	C	4L
D303	A	D	4L
D402	A	D	3P
D651	A	D	13O
D681	A	D	14O
D682	A	D	13N
D701	A	D	4F
D702	A	D	2D
D703	A	D	4G
D704	A	D	2D
D705	A	D	6F
D706	A	D	6F
D707	A	D	4H
D708	A	D	7G
D709	A	D	6B
D710	A	D	10E
D711	A	D	8B
D712	A	D	9C
D714	A	D	11F
D715	A	D	11F
D901	A	D	2I
D902	A	D	2I
D1001	A	D	18O
D1002	A	D	18M
D1004	A	D	22J
D1005	A	D	21J
D1006	A	D	18M
IC			
IC1	A	D	17M
IC2	A	D	20F
IC3	B	C	15N
IC4	B	C	15M
IC301	A	D	3L
IC401	B	C	5N
IC601	B	C	9N
IC602	B	C	10N
IC621	B	C	18H
IC651	B	C	12N
IC701	B	C	8D
IC702	A	D	11C
IC703	A	D	7B
IC704	A	D	6K
IC705	A	D	5I
IC801	B	C	14D
IC802	A	D	9H
IC803	B	C	7H
IC1001	B	C	20H
IC1101	A	D	8J
JACK			
J401	A	D	5Q
J402	A	D	6Q
J701	A	D	17P
COIL			
L1	A	D	16L
L2	A	D	15N
L3	A	D	16N
L4	A	D	15O
L5	A	D	22B
L6	A	D	15K
L7	A	D	16K
L8	A	D	12O
L9	A	D	14M
L10	A	D	14M
L11	A	D	17O
L12	B	C	21E
L13	B	C	21G
L301	A	D	2K
L401	A	D	8O
L402	A	D	8N
L403	A	D	7M
L406	A	D	11K
L701	A	D	7G
L702	A	D	7F
L703	A	D	5J
L901	A	D	2E
L1001	A	D	19M
L1002	A	D	19L
L1003	A	D	19O
L1081	A	D	19K
L1101	A	D	8I
TRANSISTOR			
Q1	B	C	14O
Q2	B	C	14O
Q3	B	C	14N
Q4	B	C	17L
Q5	B	C	15P
Q6	B	C	15P
Q7	B	C	15N
Q8	B	C	15P
Q9	B	C	16P
Q10	B	C	16P
Q11	B	C	16P
Q12	B	C	15P
Q13	B	C	16N
Q14	B	C	17N
Q15	B	C	17N
Q16	B	C	16P
Q17	B	C	17O
Q18	B	C	15J
Q19	B	C	14K
Q20	B	C	14K
Q21	B	C	15J
Q22	B	C	22C
Q23	B	C	16N
Q24	B	C	17N
Q301	B	C	1J
Q302	B	C	5L
Q303	B	C	5L
Q304	B	C	6K
Q305	B	C	3M
Q306	B	C	2O
Q311	B	C	5L
Q312	B	C	17K
Q621	B	C	17I
Q622	B	C	17I
Q623	B	C	17I
Q651	A	D	13O
Q701	B	C	4E
Q702	B	C	5F
Q703	B	C	9F
Q704	A	D	3E
Q705	A	D	17E
Q706	B	C	10C
Q707	B	C	4J
Q708	A	D	4I
Q709	B	C	5I
Q710	B	C	9E
Q711	B	C	5F
Q712	B	C	11E
Q801	B	C	16D
Q802	B	C	16D
Q901	A	D	2F
Q902	B	C	2G
Q903	A	D	2H
Q904	A	D	2H
Q905	A	D	2I
Q906	B	C	2H
Q1001	B	C	19K
Q1002	A	D	18P
Q1003	A	D	18O
Q1004	B	C	21J
Q1005	B	C	20I
Q1006	B	C	19J
Q1007	B	C	21K
Q1008	B	C	20J
Q1009	B	C	20J
Q1011	B	C	21J
Q1012	B	C	19N
Q1013	B	C	18N
Q1014	B	C	18N
Q1015	B	C	20M
Q1016	B	C	20K
Q1101	B	C	7J
RESISTOR			
R1	B	C	14N
R2	B	C	20F
R3	B	C	20G
R4	B	C	20G
R5	B	C	14N
R6	B	C	14N
R7	A	D	14O
R8	B	C	14O
R9	B	C	14O
R10	B	C	14O
R11	B	C	10F
R12	B	C	17L
R13	B	C	17L
R14	B	C	17L
R15	B	C	16L
R16	B	C	16L
R17	B	C	16L
R18	B	C	15P
R19	B	C	10J
R20	B	C	15M
R21	B	C	17N
R22	B	C	16P
R23	B	C	16N
R24	B	C	17N
R25	B	C	15P
R26	B	C	16P
R27	B	C	15P
R28	B	C	16P
R29	B	C	16O
R30	B	C	16N
R31	B	C	16M
R32	B	C	16L
R33	B	C	16P
R34	B	C	14P
R35	B	C	22G
R36	B	C	17O
R37	B	C	17N
R38	B	C	17O
R39	B	C	16O
R40	B	C	17O
R41	B	C	17O
R42	B	C	17O
R43	B	C	16J
R44	B	C	16J
R45	B	C	16J
R46	B	C	15K
R47	B	C	14J
R48	B	C	14J
R49	B	C	14J
R50	B	C	15J
R51	B	C	15J
R52	B	C	15J
R53	B	C	15J
R54	B	C	15K
R55	B	C	15K
R56	B	C	15K
R57	B	C	15K
R58	B	C	15K
R59	B	C	16K
R60	B	C	17L
R61	B	C	10L
R62	B	C	22C
R63	B	C	20G
R64	B	C	17O
R65	B	C	17O
R66	B	C	15N
R67	B	C	12P
R301	A	D	3K
R302	B	C	2K
R303	B	C	2K
R304	B	C	2L
R305	B	C	2L
R306	B	C	2K
R307	B	C	2L
R308	B	C	1K
R309	B	C	2K
R310	B	C	1K
R311	B	C	4K
R312	B	C	4L
R313	B	C	3M
R314	B	C	3M
R315	B	C	3M
R316	B	C	3L
R317	B	C	2M
R318	B	C	2O
R319	B	C	2O
R320	B	C	1L
R321	B	C	2L
R322	B	C	4L
R323	B	C	4L
R324	B	C	5L
R325	B	C	5L
R326	B	C	5K
R327	B	C	4K
R328	B	C	4K
R329	B	C	3K
R330	B	C	3N
R331	B	C	2N
R332	B	C	2N
R333	B	C	3M
R334	B	C	1L
R335	B	C	6K
R336	B	C	5K
R338	B	C	6L
R339	B	C	6L
R340	B	C	6L
R341	B	C	5L
R342	B	C	5L
R343	B	C	5L
R344	B	C	17K
R345	B	C	18K
R401	B	C	7M
R402	B	C	6M
R404	B	C	4N
R405	B	C	4N
R406	B	C	4M
R407	B	C	4M
R408	B	C	4N
R409	B	C	4N
R410	B	C	4M
R411	B	C	4M
R412	B	C	5L
R413	B	C	5M
R414	B	C	6M
R415	B	C	6N
R416	B	C	7N
R417	B	C	7N
R418	B	C	7O
R419	B	C	7O
R420	B	C	6O
R421	B	C	5O
R422	B	C	7O
R423	B	C	7O
R424	B	C	7O
R425	B	C	6O
R428	A	D	3O
R431	B	C	4O
R432	B	C	4O
R433	B	C	4N
R434	B	C	4N
R435	B	C	7N
R436	B	C	4O
R437	B	C	4O
R438	B	C	5O
R440	B	C	8N
R442	B	C	8N
R443	B	C	9P
R444	B	C	8P
R445	B	C	9O
R446	B	C	9O
R447	B	C	6M
R448	B	C	6M
R449	B	C	6M
R450	B	C	7M
R601	B	C	9M
R602	B	C	9N
R603	B	C	9N
R604	B	C	9O
R605	B	C	9N
R606	B	C	10M
R607	B	C	10M
R608	B	C	10N
R609	B	C	10N
R610	B	C	11M
R611	B	C	8O
R612	B	C	9O
R621	B	C	17J
R622	B	C	17J
R623	B	C	17I
R624	B	C	17I
R625	B	C	17H
R626	B	C	17I
R627	B	C	18I
R628	B	C	17I
R651	B	C	11M
R653	B	C	13M
R655	B	C	12M
R657	B	C	12O
R658	B	C	12O
R659	B	C	13N
R660	B	C	13N
R661	A	D	12N
R662	B	C	13O
R663	B	C	13O
R664	B	C	13N
R701	B	C	5E
R702	B	C	5E
R703	B	C	5D
R704	B	C	4E
R705	B	C	4C
R706	B	C	4C
R707	B	C	5C
R708	B	C	5C
R709	B	C	5C
R710	B	C	6C
R711	B	C	6C
R712	B	C	6C
R713	B	C	8C
R714	B	C	8B
R715	B	C	8C
R716	B	C	8C
R717	B	C	9C
R718	B	C	9C
R719	B	C	9C
R720	B	C	9C
R721	B	C	5E
R722	B	C	10B
R723	B	C	10D
R724	B	C	10E
R725	B	C	9E
R726	B	C	9E
R727	B	C	9F
R728	B	C	9E
R729	B	C	9E
R730	B	C	10E
R731	B	C	8B
R732	B	C	5J
R733	B	C	9F
R734	B	C	5F
R735	B	C	8F
R736	B	C	9F
R737	B	C	5E
R738	B	C	9F
R739	B	C	9F
R740	B	C	8F
R741	B	C	8F
R742	B	C	8G
R743	B	C	9G
R744	B	C	9D
R745	B	C	6E
R746	B	C	6E
R747	B	C	6E
R748	B	C	6E
R749	B	C	6E
R750	B	C	9F
R751	B	C	9C
R752	B	C	6I
R753	B	C	5F
R754	B	C	5E
R755	B	C	5E
R756	B	C	5E
R757	B	C	5E
R758	B	C	5E
R759	B	C	11E
R760	B	C	10C
R761	B	C	10C
R762	B	C	11D
R763	B	C	11D
R764	B	C	9C
R765	B	C	4F
R766	B	C	4G
R767	B	C	4G
R768	B	C	3C
R769	B	C	4E
R770	B	C	4E
R771	B	C	4E
R772	B	C	8F
R773	B	C	10F
R774	B	C	7C
R775	B	C	7B
R776	B	C	6C
R777	B	C	6B
R778	B	C	5B
R779	B	C	5C
R780	B	C	5B
R781	B	C	5B
R782	B	C	5C
R783	B	C	9E
R784	B	C	9F
R785	B	C	14B
R786	A	D	10A
R787	B	C	8B
R788	B	C	6B
R789	B	C	6B
R790	B	C	5C
R791	B	C	11E
R792	B	C	11E
R793	B	C	10E
R794	B	C	5F
R795	B	C	4F
R796	B	C	5H
R797	B	C	4H
R798	B	C	4I
R799	B	C	4I
R800	B	C	3B
R801	B	C	2B
R802	B	C	7B
R803	B	C	14B
R805	B	C	11D
R806	B	C	11D
R807	B	C	9C
R809	B	C	11F
R810	B	C	11F
R814	B	C	9D
R815	B	C	4G
R816	B	C	4G
R817	B	C	5F
R818	B	C	4F
R821	B	C	9C
R834	B	C	11B
R835	B	C	11B
R841	B	C	14C
R842	B	C	14C
R843	B	C	15C
R844	B	C	15C
R845	B	C	15C
R846	B	C	15C
R847	B	C	15C
R848	B	C	16C
R849	B	C	16C
R850	B	C	16C
R851	B	C	16C
R852	B	C	16C
R853	B	C	16D
R854	B	C	16D
R855	B	C	16D
R856	B	C	16D
R857	B	C	16D
R858	B	C	16D
R859	B	C	16E
R860	B	C	16E
R861	B	C	15E
R862	B	C	15E
R863	B	C	14E
R864	B	C	14E
R865	B	C	14E
R866	B	C	14E
R867	B	C	14E
R868	B	C	14E
R869	B	C	13E
R870	B	C	13E
R871	B	C	12C
R872	B	C	12D
R873	B	C	15E
R874	B	C	13E
R875	B	C	12E
R876	B	C	13E
R877	B	C	13E
R878	B	C	12E
R879	B	C	12E
R880	B	C	12D
R881	B	C	13D
R882	B	C	12D
R883	B	C	12D
R884	B	C	12C
R885	B	C	12C
R886	B	C	12C
R887	B	C	13C
R888	B	C	13C
R889	B	C	13C
R890	B	C	13C
R891	B	C	14C
R892	B	C	15B
R893	B	C	8I
R894	B	C	8I
R895	B	C	15B
R896	B	C	14B
R897	B	C	15B
R898	B	C	15B
R899	B	C	15E
R901	A	D	2G
R902	B	C	2F
R903	A	D	3G
R904	B	C	3G
R905	B	C	2F
R906	B	C	2G
R907	B	C	3I
R908	B	C	2I
R909	B	C	3I
R910	B	C	2J
R1001	B	C	18P
R1002	B	C	18P
R1003	B	C	18O
R1004	B	C	18O
R1005	B	C	21I
R1006	B	C	21J
R1007	B	C	21I
R1008	B	C	21I
R1009	B	C	21I
R1010	B	C	20J
R1011	B	C	19J
R1012	B	C	20J
R1013	B	C	20K
R1016	B	C	20J
R1017	B	C	19J
R1020	B	C	20I
R1021	B	C	20J
R1022	B	C	21J
R1023	B	C	21J
R1024	B	C	20J
R1025	B	C	18L
R1026	B	C	19I
R1027	B	C	18H
R1030	B	C	20H
R1031	B	C	20H
R1032	B	C	20H
R1033	B	C	20H
R1034	B	C	20H
R1035	B	C	20H
R1036	B	C	19H
R1037	B	C	19J
R1038	B	C	19J
R1041	B	C	20M
R1042	B	C	20N
R1043	B	C	18N
R1044	B	C	18N
R1045	B	C	18N
R1046	B	C	18N
R1048	B	C	19O
R1049	B	C	19O
R1057	B	C	19L
R1058	B	C	19K
R1059	B	C	20K
R1060	B	C	20J
R1101	B	C	7K
R1102	B	C	7K
R1103	B	C	6J
R1104	B	C	7J
R1105	B	C	7J
R1106	B	C	7J
R1107	B	C	6J
R1108	B	C	7I
R1109	B	C	7I
R1110	B	C	7J
R1111	B	C	8I
R1112	B	C	7I
R1113	B	C	7I
R1114	B	C	10G
TEST POINT			
TP333	A	D	7L
TP334	A	D	18I
TP701	A	D	10C
TP702	A	D	8F
TP792	A	D	5E
TP1101	A	D	2J
OTHERS			
CF701	A	D	7C
CF801	A	D	15E
K681	A	D	6O
K682	A	D	4P
LC1	A	D	16O
LC301	A	D	2M
LC681	A	D	7O
LC682	A	D	6O
LC683	A	D	5P
LC684	A	D	5P
PS701	A	D	7B
PS702	A	D	14B
T301	A	D	6K
T302	A	D	17K
T1001	A	D	22J
T1002	A	D	19J
TH701	A	D	5H
TU1001	A	D	18O
UN1001	A	D	20K
UN1501	A	D	19D
VR401	A	D	8N
VR901	A	D	2I
WR1003	A	D	21P
X701	A	D	6D

WAVEFORMS

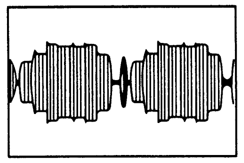
— VIDEO —

WF1 CN2-7 SEL.D Y/V



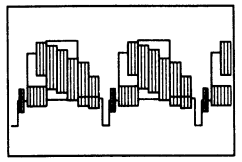
REC/PB 1.0 Vp-p
50 mV/20 μsec/DIV

WF2 CN2-9 SEL.D.C



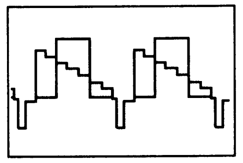
REC/PB 0.6 Vp-p
50 mV/20 μsec/DIV

WF3 CN2-19 V.TO.OSD



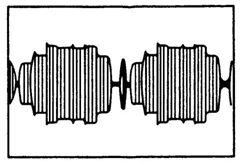
REC/PB 2.6 Vp-p
0.1 V/20 μsec/DIV

WF4 CN2-25 Y.OUT



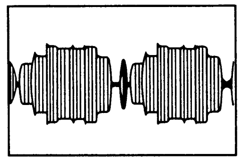
REC/PB 2.2 Vp-p
0.1 V/20 μsec/DIV

WF5 CN2-30 C.OUT



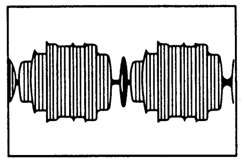
REC/PB 1.5 Vp-p
0.1 V/20 μsec/DIV

WF6 CN3-1 REC COL.



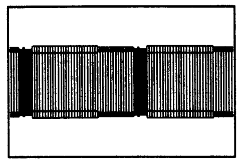
REC/PB 0.63 Vp-p
20 mV/20 μsec/DIV

WF7 CN3-7 PB COL.



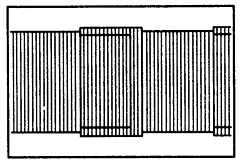
PB 0.5 Vp-p
20 mV/20 μsec/DIV

WF8 CN3-11 REC FM



REC 0.4 Vp-p
10 mV/5 msec/DIV

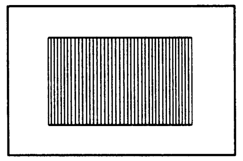
WF9 CN3-20 PB FM



PB 0.4 Vp-p
20 mV/5 msec/DIV

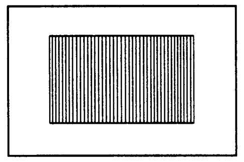
— AUDIO —

WF1 CN301-1



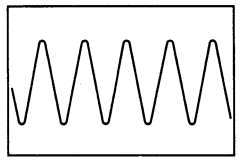
REC 52 Vp-p
2 V/1 msec/DIV

WF2 TP333 A.ERASE



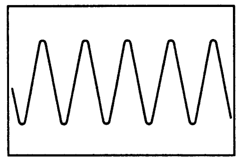
REC 40 Vp-p
2 V/1 msec/DIV

WF3 IC301-12



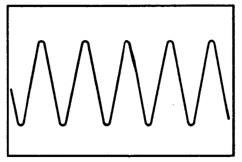
PB 0.1 Vp-p
5 mV/1 msec/DIV

WF4 IC301-16



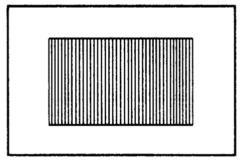
REC 0.3 Vp-p
10 mV/1 msec/DIV

WF5 IC301-22



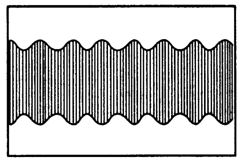
REC/PB 2.4 Vp-p
0.1 V/1 msec/DIV

WF6 IC401-15



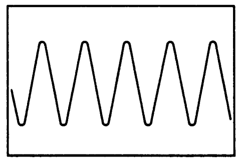
REC 0.4 Vp-p
20 mV/1 msec/DIV

WF7 IC401-19



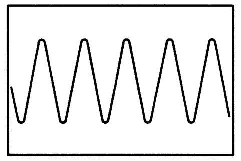
PB 0.4 Vp-p
20 mV/1 msec/DIV

WF8 IC401-41



REC/PB 1.2 Vp-p
10 mV/1 msec/DIV

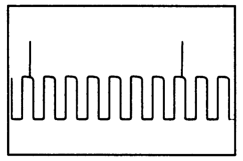
WF9 IC401-46



REC/PB 1.4 Vp-p
50 mV/1 msec/DIV

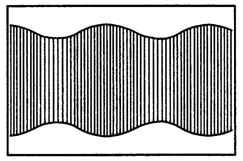
— SERVO —

WF1 IC1101-22 D.PG/FG



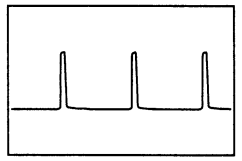
REC/PB 4.0 Vp-p
0.1 V/2 msec/DIV

WF2 IC1101-17 CAP.FG



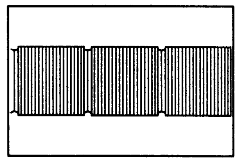
REC/PB 1.8 Vp-p
0.1 V/10 msec/DIV

WF3 IC1101-2 C.SYNC



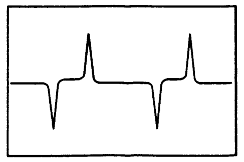
REC 5.1 Vp-p
0.2 V/20 μsec/DIV

WF4 IC1101-3 FSC



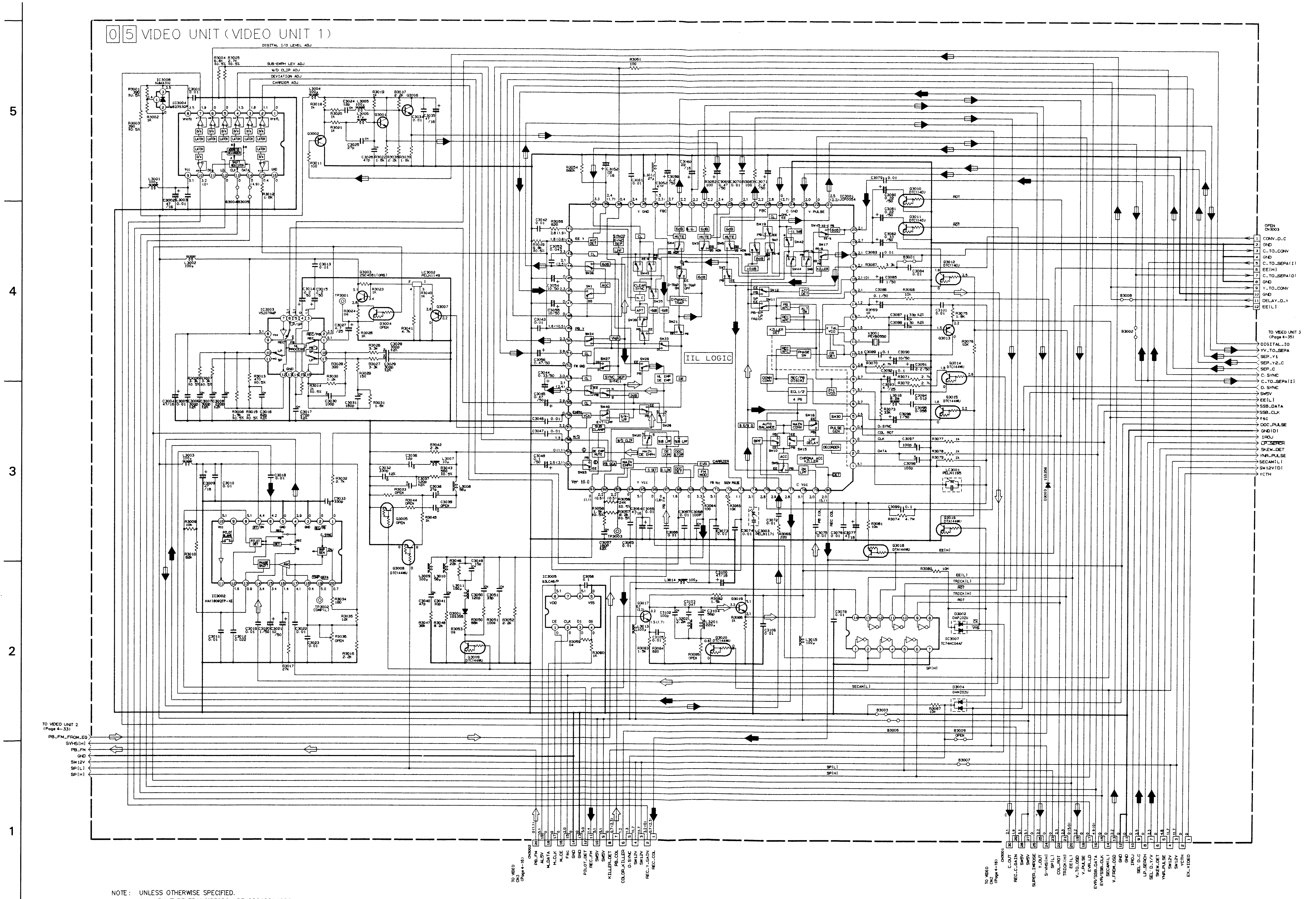
REC/PB 0.7 Vp-p
20 mV/5 msec/DIV

WF5 IC1101 CTL PULSE



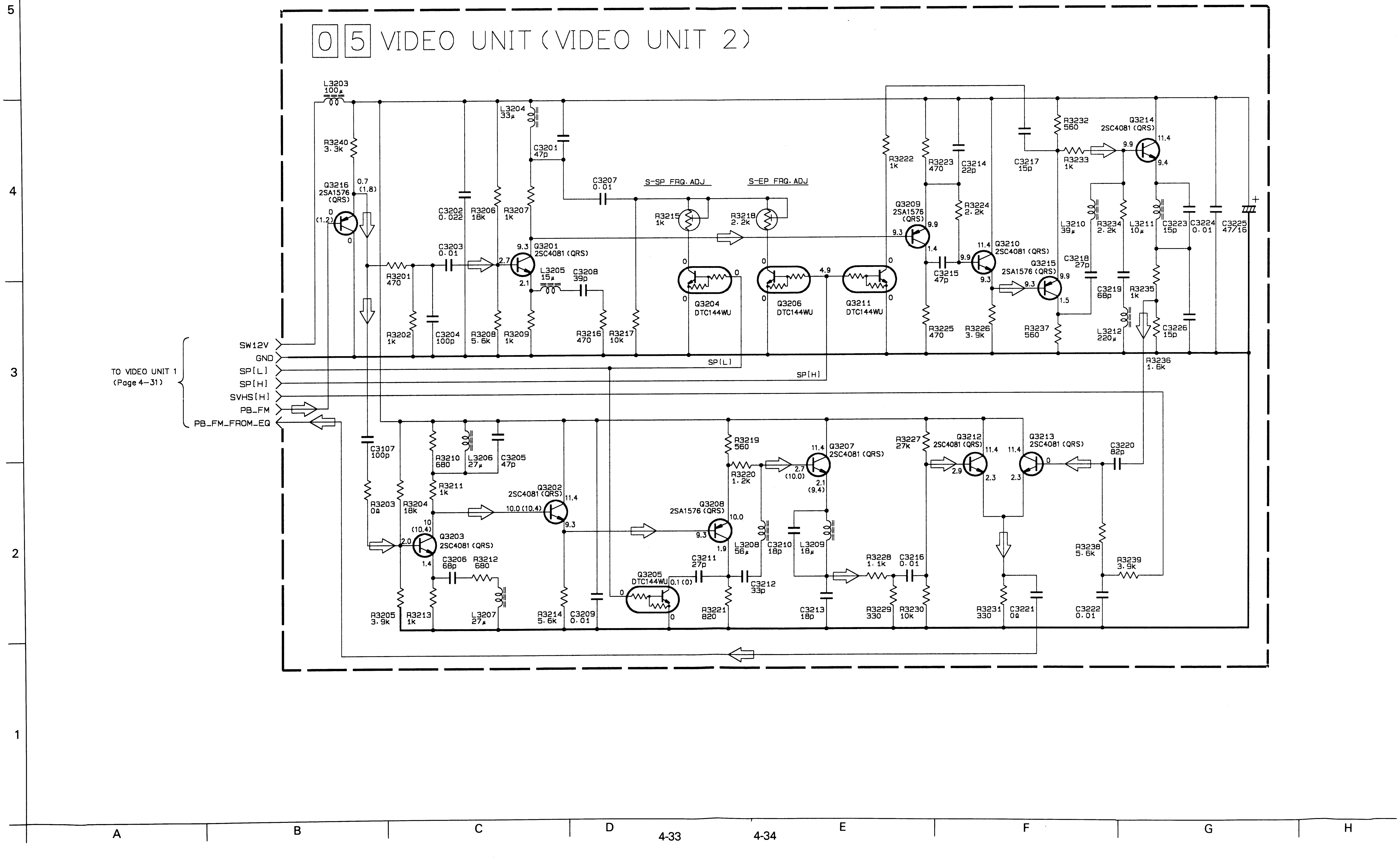
PB 2.6 Vp-p
0.1 V/10 msec/DIV

4.13 VIDEO UNIT 1 SCHEMATIC DIAGRAM

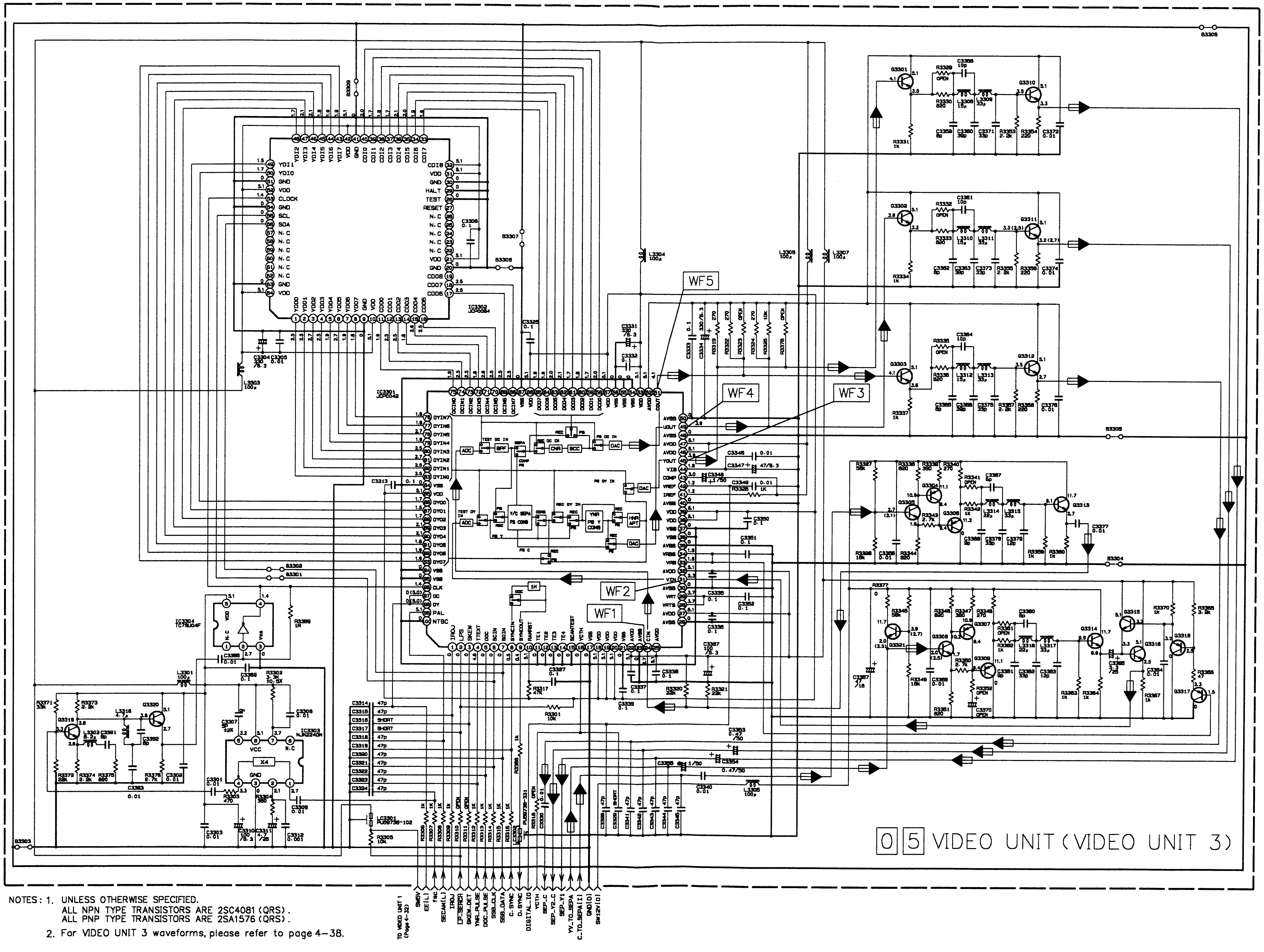

05 VIDEO UNIT (VIDEO UNIT 1)
DIGITAL I/O LEVEL ADJ
SUB-EMPH LEV ADJ
N/D CLIP ADJ
DEVIATION ADJ
CARRIER ADJ
IC3006 NJM431U
IC3004 M62353GP
IC3003 VS2076MP
IC3002 HA118092FP-XE
IC3005 93LC46/P
IC3001 PELN1171
IC3007 TC74HC04AF
IIL LOGIC
OPEN
CN3003
1 CONV_D_C
2 GND
3 C_TO_CONV
4 GND
5 C_TO_SEPA(I)
6 EE(H)
7 C_TO_SEPA(O)
8 GND
9 Y_TO_CONV
10 GND
11 DELAY_D_Y
12 EE(L)
TO VIDEO UNIT 3
(Page 4-35)
DIGITAL_IO
YV_TO_SEPA
SEP_Y1
SEP_Y2_C
SEP_C
C. SYNC
C_TO_SEPA(I)
D. SYNC
SW5V
EE(L)
SSB_DATA
SSB_CLK
fsc
DOC_PULSE
GND(D)
IROJ
LP_SERCH
SKEW_DET
YNR_PULSE
SECAM(L)
SW12V(D)
YCTH
TO VIDEO UNIT 2
(Page 4-33)
PB_FM_FROM_EQ
SVHS(H)
PB_FM
GND
SW12V
SP(L)
SP(H)
TO VIDEO
CN3
(Page 4-16)
CN3002
20 PB_FM
19 AL5V
18 M_DATA
17 M_CLK
16 M_CE
15 Fsc
14 GND
13 GND
12 PILOT_DET
11 REC_FM
10 SW5V
9 SW5V
8 KILLER_DET
7 PB_COL
6 COLOR_KILLER
5 D.SYNC
4 SW12V
3 SW12V
2 REC_Y_GAIN
1 REC_COL
TO VIDEO
CN2
(Page 4-16)
CN3001
30 C_OUT
29 REC_C_GAIN
28 SW5V
27 SW5V
26 SUPER_IMPOSE
25 Y_OUT
24 S-VHS(H)
23 SP(L)
22 COL_ROT
21 TRICK(H)
20 EE(L)
19 V_TO_OSD
18 V_PULSE
17 EVR_LD
16 EVR/SSB_DATA
15 EVR/SSB_CLK
14 SECAM(L)
13 V_FROM_OSD
12 GND
11 GND
10 IROJ
9 SEL'D_C
8 LP_SERCH
7 SEL'D_Y/V
6 SKEW_DET
5 YNR_PULSE
4 SW12V
3 SW12V
2 YCTH
1 EX_VIDEO
5
4
3
2
1
A
B
C
D
E
F
G
H

NOTE: UNLESS OTHERWISE SPECIFIED.
ALL NPN TYPE TRANSISTORS ARE 2SC4081(QRS).
ALL PNP TYPE TRANSISTORS ARE 2SA1576(QRS).

4.14 VIDEO UNIT 2 SCHEMATIC DIAGRAM


05 VIDEO UNIT (VIDEO UNIT 2)
TO VIDEO UNIT 1 (Page 4–31)
SW12V
GND
SP[L]
SP[H]
SVHS[H]
PB_FM
PB_FM_FROM_EQ
L3203 100µ
R3240 3.3k
Q3216 2SA1576 (QRS)
0.7 (1.8)
0 (1.2)
0
C3202 0.022
R3206 18k
R3207 1k
L3204 33µ
C3201 47p
C3207 0.01
S-SP FRQ. ADJ
S-EP FRQ. ADJ
R3215 1k
R3218 2.2k
C3203 0.01
R3201 470
Q3201 2SC4081 (QRS)
9.3
2.7
2.1
L3205 15µ
C3208 39p
R3202 1k
C3204 100p
R3208 5.6k
R3209 1k
R3216 470
R3217 10k
Q3204 DTC144WU
Q3206 DTC144WU
Q3211 DTC144WU
4.9
SP(L)
SP[H]
R3222 1k
R3223 470
C3214 22p
C3217 15p
R3232 560
R3233 1k
Q3214 2SC4081 (QRS)
9.9
11.4
9.4
Q3209 2SA1576 (QRS)
9.3
9.9
1.4
R3224 2.2k
Q3210 2SC4081 (QRS)
11.4
9.9
9.3
C3215 47p
Q3215 2SA1576 (QRS)
9.3
9.9
1.5
C3218 27p
L3210 39µ
R3234 2.2k
L3211 10µ
C3223 15p
C3224 0.01
C3225 47/16
C3219 68p
R3235 1k
L3212 220µ
C3226 15p
R3225 470
R3226 3.9k
R3237 560
R3236 1.6k
C3107 100p
R3203 0Ω
R3204 18k
R3210 680
L3206 27µ
C3205 47p
R3211 1k
Q3202 2SC4081 (QRS)
10.0 (10.4)
11.4
9.3
Q3203 2SC4081 (QRS)
10 (10.4)
2.0
1.4
C3206 68p
R3212 680
L3207 27µ
R3205 3.9k
R3213 1k
R3214 5.6k
C3209 0.01
Q3205 DTC144WU
0.1 (0)
0
C3211 27p
C3212 33p
R3221 820
Q3208 2SA1576 (QRS)
10.0
9.3
1.9
R3219 560
R3220 1.2k
Q3207 2SC4081 (QRS)
11.4
2.7 (10.0)
2.1 (9.4)
L3208 56µ
C3210 18p
L3209 18µ
C3213 18p
R3228 1.1k
C3216 0.01
R3229 330
R3230 10k
R3227 27k
Q3212 2SC4081 (QRS)
2.9
11.4
2.3
Q3213 2SC4081 (QRS)
11.4
2.3
0
C3220 82p
R3231 330
C3221 0Ω
R3238 5.6k
R3239 3.9k
C3222 0.01
5
4
3
2
1
A
B
C
D
E
F
G
H

4.15 VIDEO UNIT 3 SCHEMATIC DIAGRAM

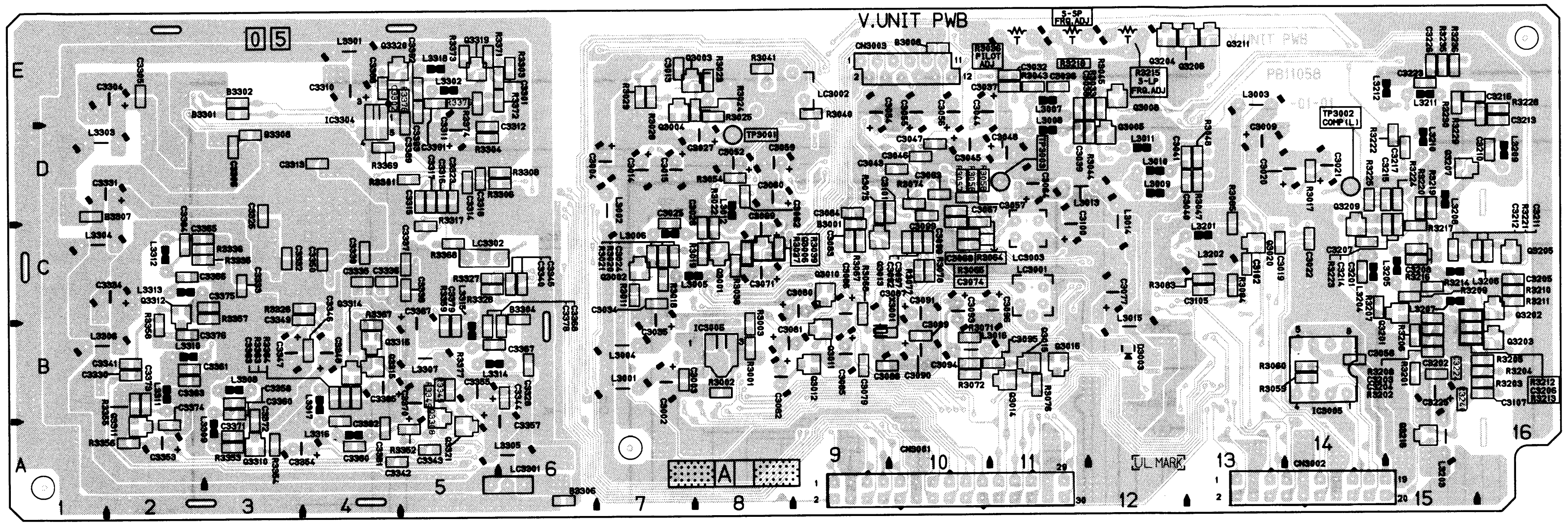

05 VIDEO UNIT (VIDEO UNIT 3)
IC3302 JCP0084
IC3301 JCP0042
IC3304 TC7SU04F
IC3303 NJM2240M
LC3301 PU59736-102
R3305 10k
WF1
WF2
WF3
WF4
WF5
Q3301
Q3302
Q3303
Q3304
Q3305
Q3306
Q3307
Q3308
Q3309
Q3310
Q3311
Q3312
Q3313
Q3314
Q3315
Q3316
Q3317
Q3318
Q3319
Q3320
Q3321
B3301
B3302
B3303
B3304
B3305
B3306
B3307
B3308
B3309
TO VIDEO UNIT 1 (Page 4-32)
SW5V
EE(L)
fsc
SECAM(L)
IROJ
LP_SERCH
SKEW_DET
YNR_PULSE
DOC_PULSE
SSB_CLK
SSB_DATA
C.SYNC
D.SYNC
DIGITAL_IO
YCTH
SEP_C
SEP_Y2_C
SEP_Y1
YV_TO_SEPA
C_TO_SEPA(I)
GND(D)
SW12V(D)
A
B
C
D
E
F
G
H
1
2
3
4
5

NOTES: 1. UNLESS OTHERWISE SPECIFIED.
ALL NPN TYPE TRANSISTORS ARE 2SC4081 (QRS).
ALL PNP TYPE TRANSISTORS ARE 2SA1576 (QRS).

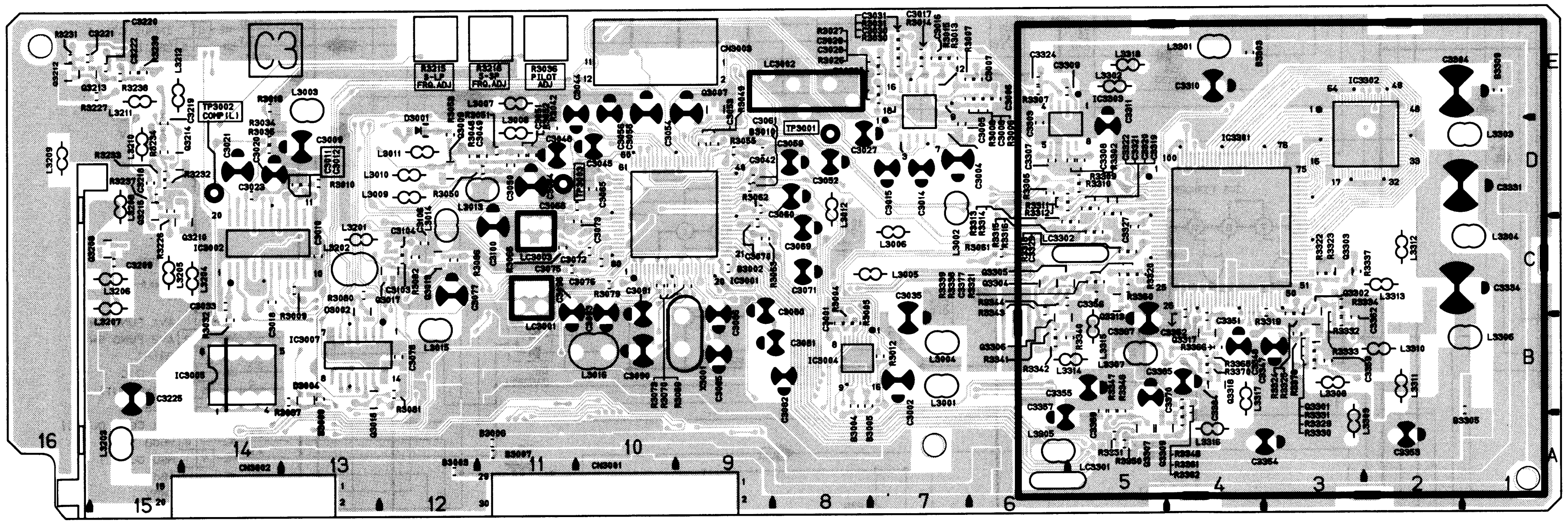
2. For VIDEO UNIT 3 waveforms, please refer to page 4-38.

4.16 VIDEO UNIT CIRCUIT BOARD

— FOIL SIDE (B) —



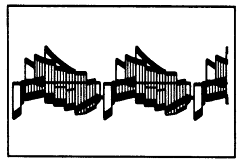
— COMPONENT SIDE (A) —



WAVEFORMS

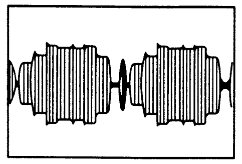
— VIDEO UNIT 3 —

WF1 IC3301-24



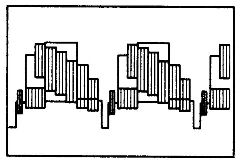
REC 1.5 Vp-p
50 mV/20 μsec/DIV

WF1 IC3301-24



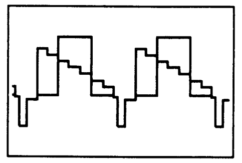
PB 1.2 Vp-p
50 mV/20 μsec/DIV

WF2 IC3301-31



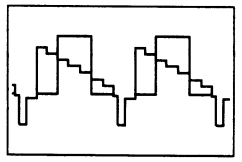
REC 1.5 Vp-p
50 mV/20 μsec/DIV

WF2 IC3301-31



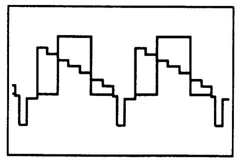
PB 1.5Vp-p
50 mV/20 μsec/DIV

WF3 IC3301-45



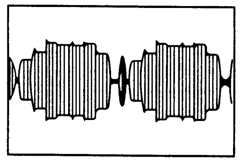
REC/PB 1.8 Vp-p
50 mV/20 μsec/DIV

WF4 IC3301-49



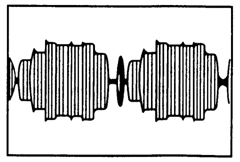
REC 1.8 Vp-p
50 mV/20 μsec/DIV

WF4 IC3301-49



PB 1.3 Vp-p
50 mV/20 μsec/DIV

WF5 IC3301-51



REC/PB 1.2 Vp-p
50 mV/20 μsec/DIV

COMPONENT PARTS LOCATION GUIDE < VIDEO UNIT >

REF.NO.	LOCATION		
CAPACITOR			
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C3002	A	D	8B
C3003	B	C	8B
C3004	A	D	7D
C3005	A	C	7D
C3006	A	C	7E
C3007	A	C	7E
C3008	A	C	7E
C3009	A	D	14D
C3010	A	C	14C
C3011	A	C	14D
C3012	A	C	14D
C3013	B	C	8E
C3014	A	D	8D
C3015	A	D	8D
C3016	A	C	7E
C3017	A	C	8E
C3018	A	C	14C
C3019	B	C	14C
C3020	A	D	14D
C3021	A	D	15D
C3022	B	C	14C
C3023	A	C	14D
C3024	B	C	8C
C3025	B	C	8C
C3026	B	C	8C
C3027	A	D	8D
C3028	A	C	8E
C3029	A	C	8E
C3030	A	C	8E
C3031	A	C	8E
C3032	B	C	11E
C3033	A	C	15C
C3034	B	C	8C
C3035	A	D	8B
C3036	B	C	12E
C3037	B	C	11E
C3038	B	C	12E
C3039	B	C	12D
C3040	B	C	13D
C3041	B	C	13D
C3042	A	C	9D
C3043	B	C	10D
C3044	A	D	11E
C3045	A	D	11D
C3046	B	C	10D
C3047	B	C	11D
C3048	A	D	11D
C3049	A	C	12D
C3050	A	C	12D
C3051	A	C	12D
C3052	A	D	9D
C3053	A	C	10D
C3054	A	D	10E
C3055	A	D	10E
C3056	A	D	11E
C3057	B	C	11D
C3058	B	C	15B
C3059	A	D	9D
C3060	A	D	9D
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C3064	A	D	12D
C3065	A	C	11D
C3066	A	C	11D
C3067	B	C	11D
C3068	B	C	11C
C3069	A	D	9C
C3070	A	C	9C
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C3091	A	D	10C
C3092	B	C	10C
C3093	A	D	11C
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C3096	A	D	11C
C3097	B	C	10C
C3098	B	C	10C
C3099	B	C	10D
C3100	A	D	12C
C3101	B	C	10D
C3102	B	C	14C
C3103	A	C	13C
C3104	A	C	13C
C3105	B	C	13C
C3106	A	C	13C
C3107	B	C	16B
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C3204	B	C	16B
C3205	B	C	16C
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C3207	B	C	15C
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C3212	B	C	16C
C3213	B	C	16D
C3214	B	C	15C
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C3219	A	C	15E
C3220	A	C	16E
C3221	A	C	16E
C3222	A	C	16E
C3223	B	C	16E
C3224	B	C	16B
C3225	A	D	16B
C3226	B	C	16E
C3301	B	C	6E
C3302	B	C	5E
C3303	A	C	6D
C3304	A	D	2E
C3305	B	C	2E
C3306	B	C	3D
C3307	A	C	6D
C3308	A	C	6D
C3309	A	C	6E
C3310	A	D	5E
C3311	A	D	6D
C3312	B	C	6D
C3313	B	C	4D
C3314	B	C	6D
C3315	B	C	5D
C3316	B	C	6D
C3317	B	C	5D
C3318	B	C	6D
C3319	A	C	6D
C3320	A	C	6D
C3321	A	C	6D
C3322	A	C	6D
C3323	B	C	6D
C3324	A	C	6E
C3325	B	C	4D
C3327	A	C	5C
C3328	B	C	6B
C3329	A	C	5C
C3330	B	C	2B
C3331	A	D	2D
C3332	B	C	4C
C3333	B	C	3C
C3334	A	D	2C
C3335	B	C	5C
C3336	B	C	5C
C3337	B	C	5C
C3338	B	C	5C
C3339	B	C	5C
C3340	B	C	6C
C3341	B	C	2B
C3342	B	C	5A
C3343	B	C	5A
C3344	B	C	6B
C3345	B	C	6C
C3346	B	C	4B
C3347	A	D	4B
C3348	A	D	4B
C3349	B	C	4C
C3350	B	C	4C
C3351	A	C	5B
C3352	A	C	5C
C3353	A	D	3A
C3354	A	D	4A
C3355	A	D	6B
C3356	A	C	6C
C3357	A	D	6A
C3358	B	C	3B
C3359	A	C	3B
C3360	B	C	3B
C3361	B	C	3B
C3362	A	C	3B
C3363	B	C	3B
C3364	B	C	3C
C3365	B	C	3C
C3366	B	C	3C
C3367	B	C	6B
C3368	B	C	6B
C3369	A	C	6B
C3370	A	D	5B
C3371	B	C	3A
C3372	B	C	4B
C3373	B	C	3B
C3374	B	C	3A
C3375	B	C	3C
C3376	B	C	3B
C3377	A	C	6C
C3378	B	C	6B
C3379	B	C	6B
C3380	B	C	5A
C3381	B	C	5A
C3382	B	C	4A
C3383	B	C	4B
C3384	A	C	5B
C3385	A	D	5B
C3387	A	D	5B
C3388	B	C	5E
C3389	B	C	5E
C3391	B	C	5E
C3392	B	C	5E
C3393	B	C	5E
CONNECTOR			
CN3001	A	D	10A
CN3002	A	D	14A
CN3003	A	D	10E
DIODE			
D3001	A	C	13D
D3002	A	C	13C
D3003	B	C	13B
D3004	A	C	14B
IC			
IC3001	A	C	10D
IC3002	A	C	14C
IC3003	A	C	8E
IC3004	A	C	8B
IC3005	A	D	15B
IC3006	B	C	8B
IC3007	A	C	13B
IC3301	A	C	4C
IC3302	A	C	3D
IC3303	A	C	6D
IC3304	B	C	5E
COIL			
L3001	A	D	8B
L3002	A	D	7D
L3003	A	D	14E
L3004	A	D	7B
L3005	A	D	8C
L3006	A	D	8C
L3007	A	D	12E
L3008	A	D	12D
L3009	A	D	13D
L3010	A	D	13D
L3011	A	D	12D
L3012	A	D	8D
L3013	A	D	12D
L3014	A	D	12D
L3015	A	D	13B
L3016	A	D	11B
L3201	A	D	13C
L3202	A	D	13C
L3203	A	D	16A
L3204	A	D	15C
L3205	A	D	15C
L3206	A	D	16C
L3207	A	D	16C
L3208	A	D	16D
L3209	A	D	16D
L3210	A	D	16D
L3211	A	D	15E
L3212	A	D	15E
L3301	A	D	4E
L3302	A	D	5E
L3303	A	D	2D
L3304	A	D	2C
L3305	A	D	6A
L3306	A	D	2B
L3307	A	D	6B
L3308	A	D	3B
L3309	A	D	3B
L3310	A	D	3B
L3311	A	D	3B
L3312	A	D	3C
L3313	A	D	3C
L3314	A	D	6B
L3315	A	D	6B
L3316	A	D	5A
L3317	A	D	4A
L3318	A	D	6E
TRANSISTOR			
Q3001	B	C	8C
Q3002	B	C	8C
Q3003	B	C	8E
Q3004	B	C	8E
Q3005	B	C	12D
Q3006	B	C	9C
Q3007	A	C	10E
Q3008	B	C	12E
Q3009	A	C	12D
Q3010	B	C	9C
Q3011	B	C	9B
Q3012	B	C	9B
Q3013	B	C	10C
Q3014	B	C	11B
Q3015	B	C	12B
Q3016	B	C	12B
Q3017	A	C	13C
Q3018	A	C	13B
Q3019	A	C	12C
Q3020	B	C	14C
Q3201	B	C	15C
Q3202	B	C	16C
Q3203	B	C	16B
Q3204	B	C	13E
Q3205	B	C	16C
Q3206	B	C	13E
Q3207	B	C	16D
Q3208	A	C	16C
Q3209	B	C	15C
Q3210	A	C	15D
Q3211	B	C	13E
Q3212	A	C	16E
Q3213	A	C	16E
Q3214	A	C	15D
Q3215	A	C	15D
Q3216	B	C	16A
Q3301	A	C	4B
Q3302	A	C	4C
Q3303	A	C	3C
Q3304	A	C	6C
Q3305	A	C	6C
Q3306	A	C	6B
Q3307	A	C	5A
Q3308	B	C	6B
Q3309	A	C	5A
Q3310	B	C	4A
Q3311	B	C	2A
Q3312	B	C	3C
Q3313	A	C	6C
Q3314	B	C	5B
Q3315	B	C	5B
Q3316	B	C	5B
Q3317	A	C	5B
Q3318	A	C	5B
Q3319	B	C	6E
Q3320	B	C	5E
Q3321	B	C	6A
RESISTOR			
R3001	B	C	9B
R3002	B	C	8B
R3003	B	C	9B
R3004	A	C	8B
R3005	A	C	8B
R3006	A	C	7E
R3007	A	C	7E
R3008	A	C	7E
R3009	A	C	14C
R3010	A	C	14D
R3011	B	C	7C
R3012	A	C	8B
R3013	A	C	7E
R3014	A	C	8E
R3015	A	C	7E
R3016	A	C	14E
R3017	B	C	14D
R3018	B	C	8C
R3019	B	C	8C
R3020	B	C	8C
R3021	B	C	8C
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R3031	A	C	8E
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R3034	A	C	14D
R3035	A	C	14D
R3036	A	D	11E
R3037	B	C	9C
R3038	B	C	9C
R3039	B	C	9C
R3040	B	C	9E
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R3048	B	C	13D
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R3050	A	C	12D
R3051	A	C	12D
R3052	A	C	12D
R3053	A	C	12D
R3054	B	C	9D
R3055	A	C	9D
R3056	B	C	11D
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R3060	B	C	14B
R3061	A	C	7C
R3062	A	C	9D
R3063	A	C	9C
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R3079	A	C	11C
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R3081	A	C	13B
R3082	A	C	13C
R3083	B	C	13C
R3084	B	C	14C
R3085	B	C	14C
R3086	A	C	12C
R3087	A	C	14B
R3201	B	C	15B
R3202	B	C	16B
R3203	B	C	16B
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R3215	A	D	13E
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R3218	A	D	12E
R3219	B	C	16D
R3220	B	C	15D
R3221	B	C	16C
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R3226	A	C	15D
R3227	A	C	16E
R3228	B	C	16E
R3229	B	C	16E
R3230	B	C	16E
R3231	A	C	16E
R3232	A	C	15D
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R3237	A	C	15D
R3238	A	C	16E
R3239	A	C	16E
R3240	B	C	16B
R3301	B	C	5D
R3302	A	C	6D
R3303	B	C	6E
R3304	B	C	6D
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R3309	A	C	6D
R3310	A	C	6D
R3311	A	C	6D
R3312	A	C	6D
R3313	A	C	6C
R3314	A	C	6C
R3315	A	C	6C
R3316	A	C	6C
R3317	B	C	5C
R3318	A	C	6C
R3319	A	C	4C
R3320	A	C	5C
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R3330	A	C	4B
R3331	A	C	4B
R3332	A	C	3C
R3333	A	C	3B
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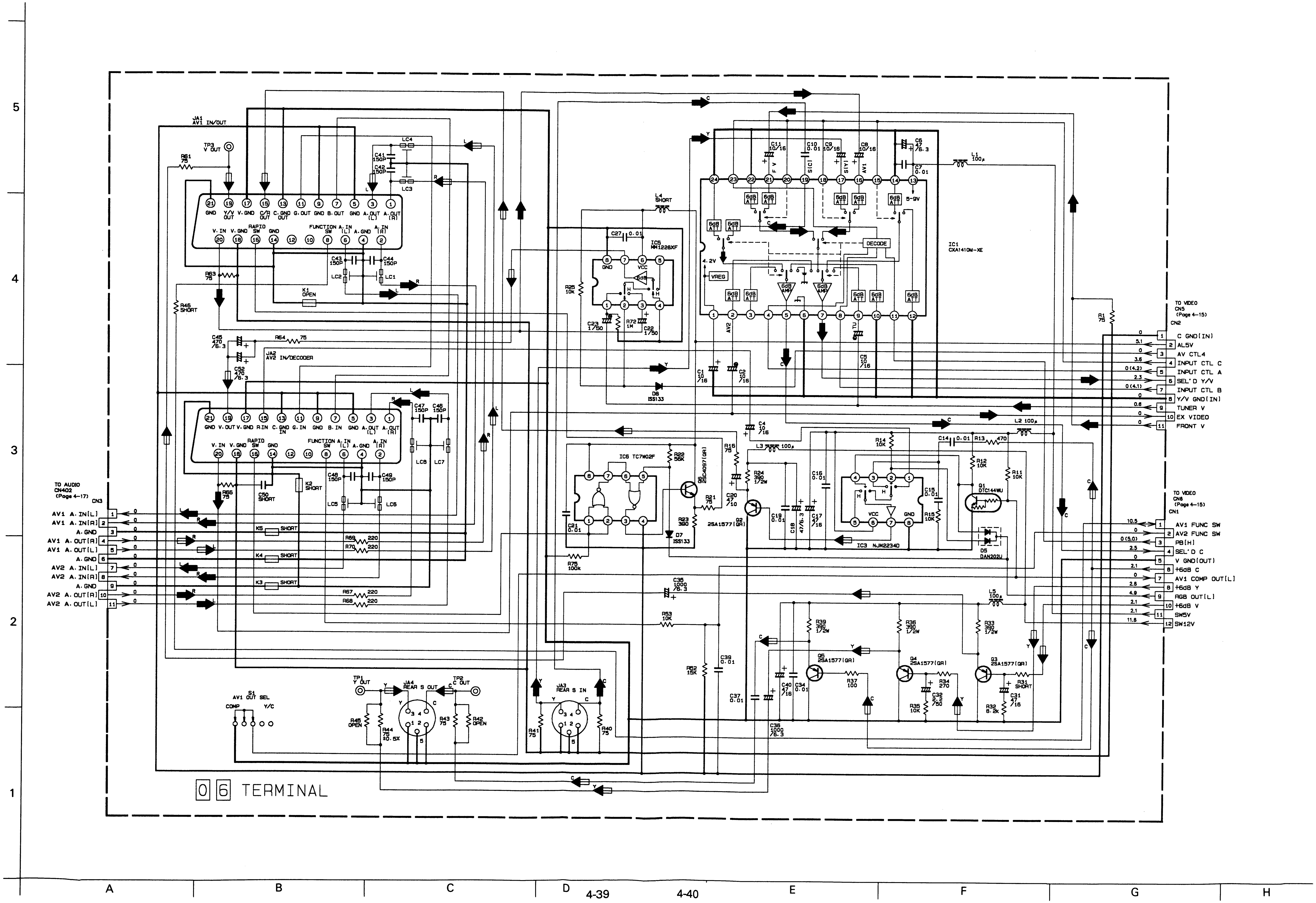
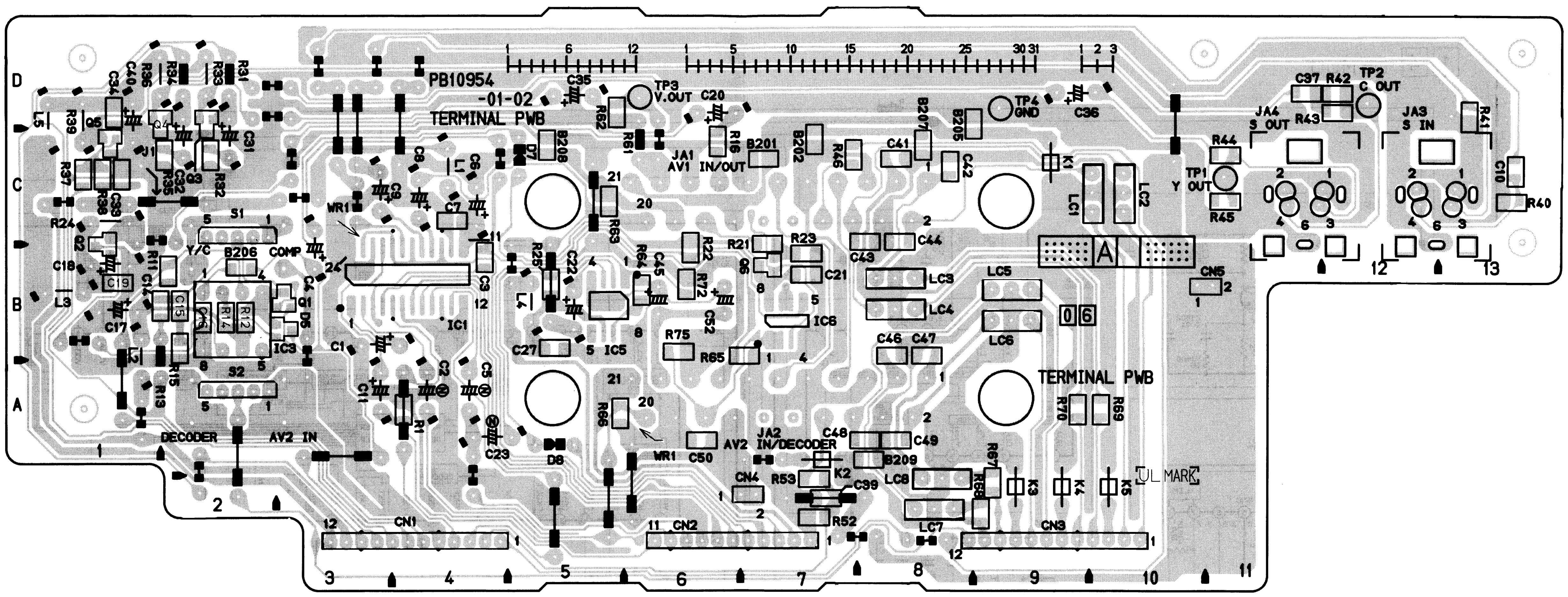
R3335	B	C	3C
R3336	B	C	3C
R3337	A	C	3C
R3338	A	C	6C
R3339	A	C	6C
R3340	A	C	6B
R3341	A	C	6B
R3342	A	C	6B
R3343	A	C	6C
R3344	A	C	6C
R3345	B	C	6B
R3346	A	C	6B
R3347	A	C	6B
R3348	A	C	5B
R3349	B	C	5B
R3350	A	C	6A
R3351	A	C	6A
R3352	B	C	5A
R3353	B	C	3A
R3354	B	C	4A
R3355	B	C	2B
R3356	B	C	2A
R3357	B	C	3C
R3358	B	C	3B
R3359	B	C	6B
R3360	A	C	5C
R3361	A	C	5B
R3362	A	C	5A
R3363	B	C	5B
R3364	B	C	5B
R3365	A	C	5B
R3366	A	C	5B
R3367	B	C	5B
R3368	B	C	6C
R3369	B	C	5D
R3370	A	C	5B
R3371	B	C	6E
R3372	B	C	6E
R3373	B	C	6E
R3374	B	C	6E
R3375	B	C	6E
R3376	B	C	5E
R3377	B	C	6B
R3378	A	C	4B
TEST POINT			
TP3001	A	D	9D
TP3002	A	D	15D
TP3003	A	D	11D
OTHERS			
LC3001	A	D	11C
LC3002	A	D	9E
LC3003	A	D	11C
LC3301	A	D	6A
LC3302	A	D	6C
X3001	A	D	10B

4.17 TERMINAL SCHEMATIC DIAGRAM


JA1 AV1 IN/OUT
JA2 AV2 IN/DECODER
JA3 REAR S IN
JA4 REAR S OUT
TP1 Y OUT
TP2 C OUT
TP3 V OUT
S1 AV1 OUT SEL
COMP
Y/C
IC1 CXA1410M-XE
IC3 NJM2234D
IC5 MM1228XF
IC6 TC7W02F
DECODE
VREG
6dB ATT
6dB AMP
Q1 DTC144WU
Q2 2SA1577(QR)
Q3 2SA1577(QR)
Q4 2SA1577(QR)
Q5 2SA1577(QR)
Q6 2SC4097(QR)
D5 DAN202U
D7 1SS133
D8 1SS133
L1 100μ
L2 100μ
L3 100μ
L4 SHORT
L5 100μ
K1 OPEN
K2 SHORT
K3 SHORT
K4 SHORT
K5 SHORT
TO AUDIO CN402 (Page 4-17) CN3
AV1 A.IN[L]
AV1 A.IN[R]
A.GND
AV1 A.OUT[R]
AV1 A.OUT[L]
A.GND
AV2 A.IN[L]
AV2 A.IN[R]
A.GND
AV2 A.OUT[R]
AV2 A.OUT[L]
TO VIDEO CN5 (Page 4-15) CN2
C GND(IN)
AL5V
AV CTL4
INPUT CTL C
INPUT CTL A
SEL'D Y/V
INPUT CTL B
Y/V GND(IN)
TUNER V
EX VIDEO
FRONT V
TO VIDEO CN6 (Page 4-15) CN1
AV1 FUNC SW
AV2 FUNC SW
PB(H)
SEL'D C
V GND(OUT)
+6dB C
AV1 COMP OUT[L]
+6dB Y
RGB OUT[L]
+6dB V
SW5V
SW12V
06 TERMINAL
A
B
C
D
E
F
G
H
1
2
3
4
5

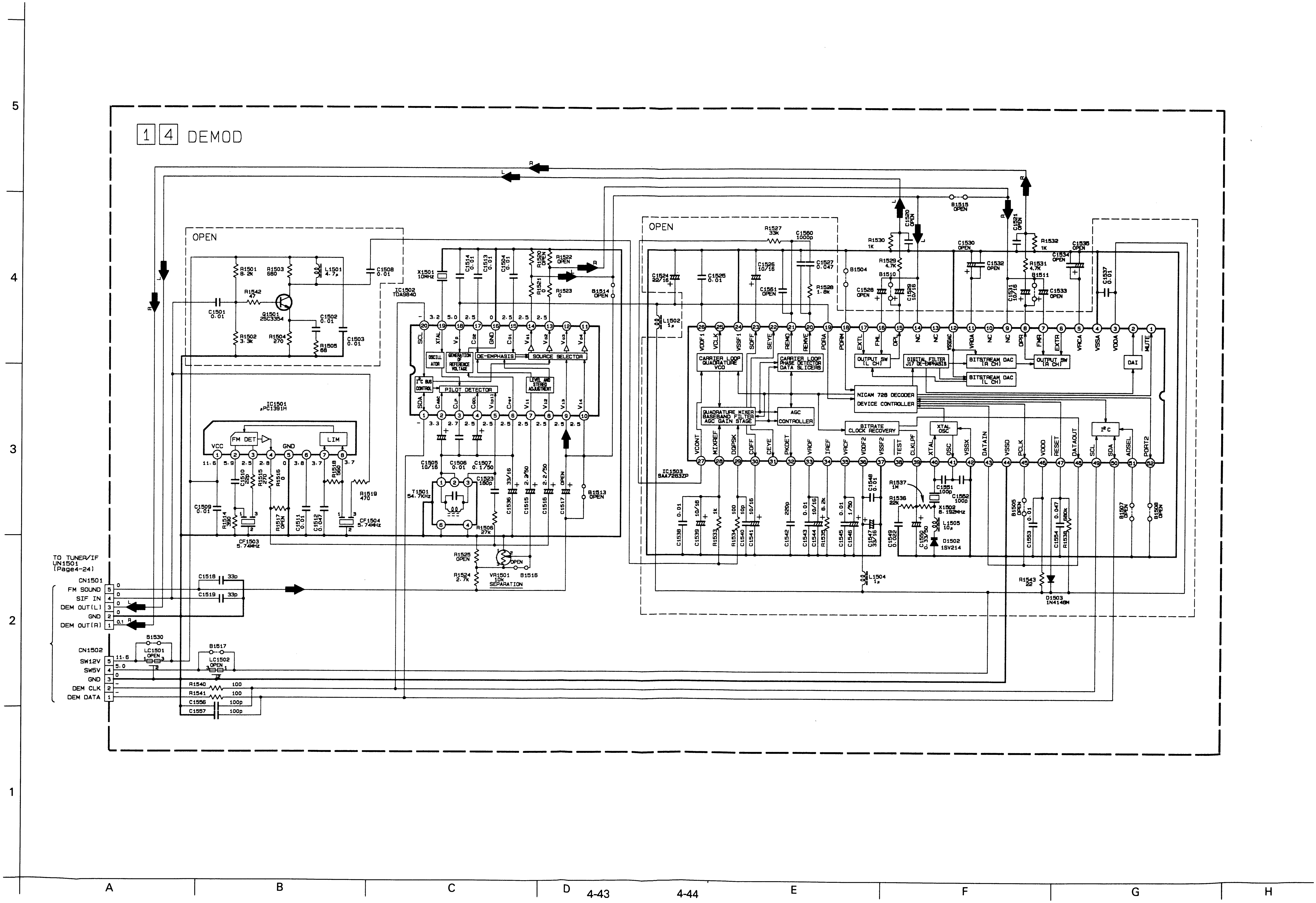
4.18 TERMINAL CIRCUIT BOARD


PB10954
-01-02
TERMINAL PWB
TP3 V.OUT
TP4 GND
TP1 Y OUT
TP2 C OUT
JA1 AV1 IN/OUT
JA2 IN/DECODER
AV2
JA4 S OUT
JA3 S IN
DECODER
AV2 IN
Y/C
COMP
S1
S2
IC1
IC3
IC5
IC6
CN1
CN2
CN3
CN4
CN5
UL MARK
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13

COMPONENT PARTS LOCATION GUIDE <TERMINAL>

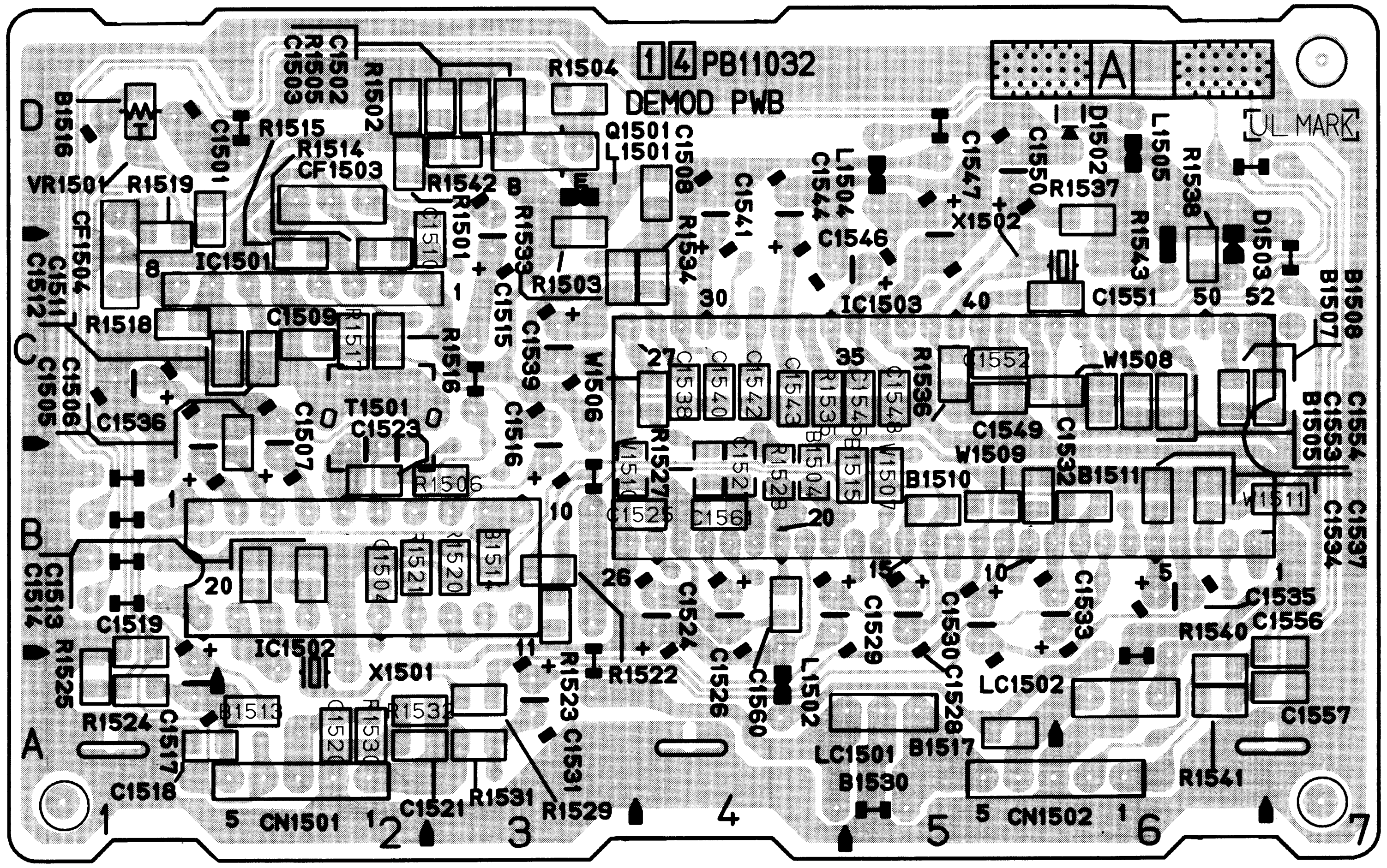
REF.NO.	LOCATION		
CAPACITOR			
C1	A	D	4B
C2	A	D	4A
C3	B	C	4B
C4	A	D	3B
C5	A	D	4A
C6	A	D	4C
C7	B	C	4C
C8	A	D	4C
C9	A	D	3C
C10	B	C	13C
C11	A	D	3A
C14	B	C	1B
C15	B	C	2B
C16	B	C	2B
C17	A	D	1B
C18	A	D	1B
C19	B	C	1B
C20	A	D	6D
C21	B	C	7B
C22	A	D	5B
C23	A	D	4A
C27	B	C	5B
C31	A	D	2D
C32	A	D	2D
C33	B	C	1C
C34	B	C	1D
C35	A	D	5D
C36	A	D	9D
C37	B	C	11D
C39	B	C	7A
C40	A	D	1D
C41	B	C	8C
C42	B	C	8C
C43	B	C	8C
C44	B	C	8C
C45	A	D	6B
C46	B	C	8B
C47	B	C	8B
C48	B	C	8A
C49	B	C	8A
C50	B	C	6A
C52	A	D	6B
CONNECTOR			
CN1	A	D	4A
CN2	A	D	7A
CN3	A	D	10A
CN4	A	D	6A
CN5	A	D	10B
DIODE			
D5	B	C	3B
D7	A	D	5C
D8	A	D	5A
IC			
IC1	B	C	4B
IC3	A	D	2B
IC5	B	C	5B
IC6	B	C	7B
JACK			
JA1	A	D	7C
JA2	A	D	7A
JA3	A	D	12C
JA4	A	D	11C
COIL			
L1	A	D	4C
L2	A	D	1A
L3	A	D	1B
L4	A	D	5B
L5	A	D	1C
TRANSISTOR			
Q1	B	C	3B
Q2	B	C	1C
Q3	B	C	2D
Q4	B	C	1D
Q5	B	C	1C
Q6	B	C	7B
RESISTOR			
R1	B	C	4A
R11	B	C	2B
R12	B	C	2B
R13	A	D	1A
R14	B	C	2B
R15	B	C	2B
R16	B	C	6C
R21	B	C	7C
R22	B	C	6B
R23	B	C	7B
R24	A	D	1C
R25	B	C	5B
R31	A	D	2D
R32	B	C	2C
R33	A	D	2D
R34	A	D	2D
R35	B	C	1C
R36	A	D	1D
R37	B	C	1C
R38	B	C	1C
R39	A	D	1C
R40	B	C	13C
R41	B	C	13D
R42	B	C	12D
R43	B	C	12D
R44	B	C	11C
R45	B	C	11C
R46	B	C	7C
R52	B	C	7A
R53	B	C	7A
R61	A	D	6C
R62	B	C	5D
R63	B	C	5C
R64	B	C	6B
R65	B	C	6B
R66	B	C	5A
R67	B	C	9A
R68	B	C	9A
R69	B	C	10A
R70	B	C	9A
R72	B	C	6B
R75	B	C	6B
SWITCH			
S1	A	D	2B
S2	A	D	2A
TEST POIT			
TP1	A	D	11C
TP2	A	D	12D
TP3	A	D	6D
TP4	A	D	9D
OTHERS			
K1	A	D	9C
K2	A	D	7A
K3	A	D	9A
K4	A	D	9A
K5	A	D	10A
LC1	A	D	9C
LC2	A	D	10C
LC3	A	D	8B
LC4	A	D	8B
LC5	A	D	9B
LC6	A	D	9B
LC7	A	D	8A
LC8	A	D	8A

4.19 DEMODULATOR SCHEMATIC DIAGRAM



1 4 DEMOD
OPEN
TO TUNER/IF UN1501 (Page4-24)
CN1501
FM SOUND
SIF IN
DEM OUT(L)
GND
DEM OUT(R)
CN1502
SW12V
SW5V
GND
DEM CLK
DEM DATA
B1530
LC1501 OPEN
B1517
LC1502 OPEN
R1540 100
R1541 100
C1556 100p
C1557 100p
C1518 33p
C1519 33p
R1501 8.2k
R1503 680
L1501 4.7μ
C1508 0.01
R1542 47
C1501 0.01
Q1501 2SC3354
C1502 0.01
C1503 0.01
R1502 3.3k
R1504 270
R1505 68
IC1501 μPC1391H
FM DET
LIM
VCC
GND
C1510 22p
R1515 270
R1516 0
R1518 560
R1519 470
C1509 0.01
R1514 390
CF1503 5.74MHz
R1517 OPEN
C1511 0.01
C1512 0.047
CF1504 5.74MHz
X1501 10MHz
IC1502 TDA9840
C1514 0.01
C1513 0.01
C1504 0.01
R1520 OPEN
R1521 0
R1522 OPEN
R1523 0
B1514 OPEN
SCL
XTAL
Vo
Cde
GND
Co1
Vo1
Vo2
Vo3
Vo4
SDA
Cagc
CLP
CDEL
Vin11
Cref
Vi1
Vi2
Vi3
Vi4
OSCILLATOR
GENERATION OF REFERENCE VOLTAGE
DE-EMPHASIS
SOURCE SELECTOR
I²C BUS CONTROL
PILOT DETECTOR
LEVEL AND STEREO ADJUSTMENT
C1505 10/16
C1506 0.01
C1507 0.1/50
C1523 180p
T1501 54.7KHz
R1506 27k
C1536 33/16
C1515 2.2/50
C1516 2.2/50
C1517 OPEN
B1513 OPEN
R1525 OPEN
R1524 2.7k
VR1501 10K SEPARATION
B1516 OPEN
R1527 33k
C1560 1000p
C1524 22/16
C1525 0.01
C1526 10/16
C1561 OPEN
C1527 0.047
R1528 1.8k
L1502 1μ
B1504
R1530 1K
R1529 4.7K
B1510
C1520 OPEN
C1528 OPEN
C1529 10/16
B1515 OPEN
C1530 OPEN
C1532 OPEN
C1521 OPEN
R1532 1K
R1531 4.7K
B1511
C1531 10/16
C1533 OPEN
C1534 OPEN
C1535 OPEN
C1537 0.01
VDDF1
VCLK
VSSF1
SOFF
SEYE
REMQ
REMVE
PORA
PORM
EXTL
FML
OPL
NC
VSSDAC
VRDA
DPR
FMR
EXTR
VRCA
VSSA
VDDA
MUTE
CARRIER LOOP QUADRATURE VCO
CARRIER LOOP PHASE DETECTOR DATA SLICERS
OUTPUT SW (L CH)
DIGITAL FILTER J17 DE-EMPHASIS
BITSTREAM DAC (R CH)
BITSTREAM DAC (L CH)
OUTPUT SW (R CH)
DAI
NICAM 728 DECODER DEVICE CONTROLLER
QUADRATURE MIXER BASEBAND FILTER AGC GAIN STAGE
AGC CONTROLLER
BITRATE CLOCK RECOVERY
XTAL OSC
I²C
VCONT
MIXREF
DQPSK
COFF
CEYE
PKDET
VRQF
IREF
VRCF
VDDF2
VSSF2
TEST
CLKLPF
XTAL
OSC
VSSX
DATAIN
VSSD
PCLK
VDDD
RESET
DATAOUT
SCL
SDA
ADSEL
PORT2
IC1503 SAA7283ZP
C1538 0.01
C1539 10/16
R1533 1k
R1534 100
C1540 10p
C1541 10/16
C1542 220p
C1543 0.01
C1544 10/16
R1535 8.2k
C1545 0.01
C1546 1/50
C1547 33/16
C1548 0.01
C1549 0.022
R1537 1M
R1536 22k
C1550 0.33/50
C1551 100p
C1552 100p
X1502 6.192MHz
L1505 10μ
D1502 1SV214
L1504 1μ
B1505 OPEN
C1553 0.01
C1554 0.047
R1538 680k
B1507 OPEN
B1508 OPEN
R1543 22
D1503 1N4148M
A
B
C
D
E
F
G
H
1
2
3
4
5

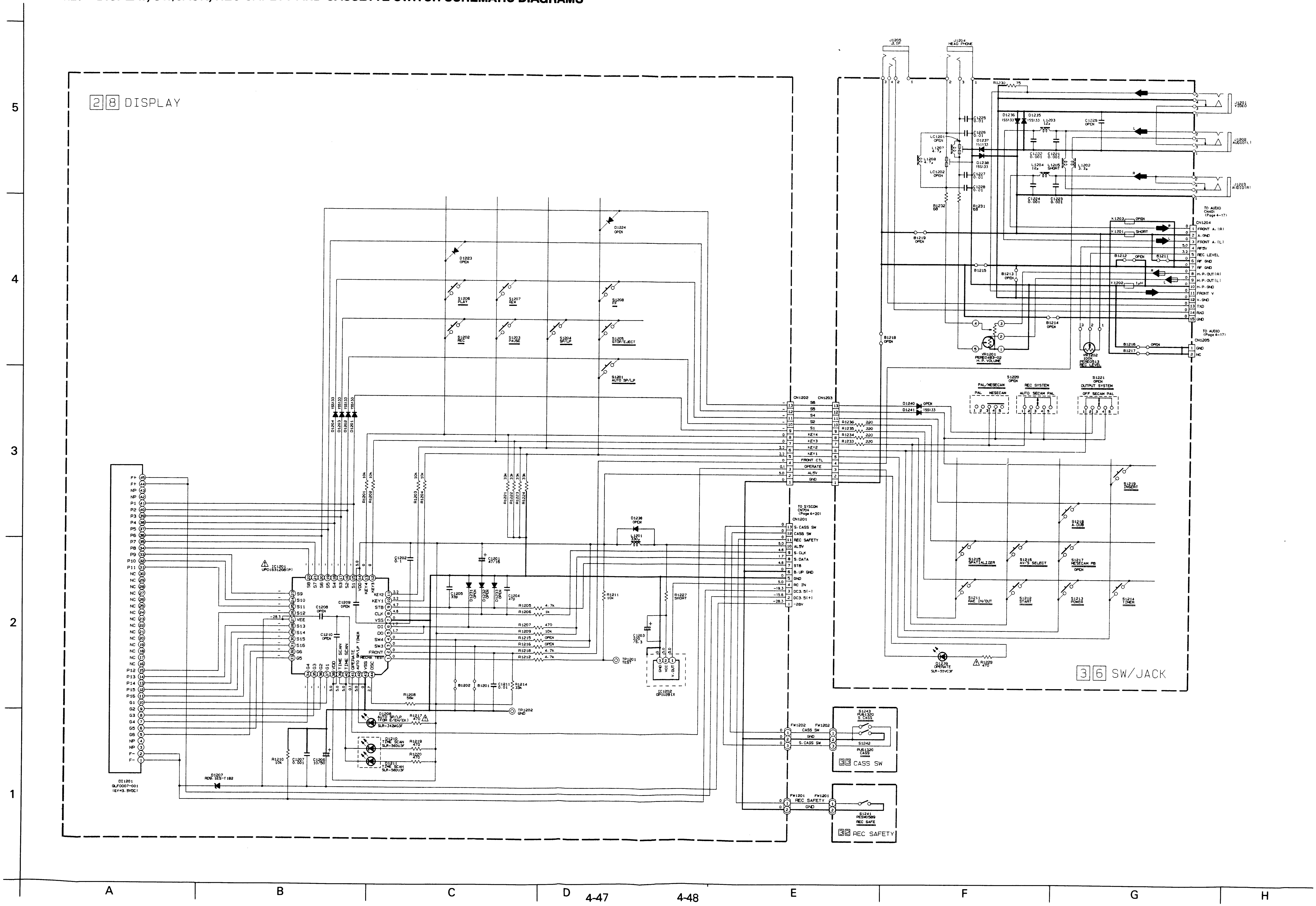
4.20 DEMODULATOR CIRCUIT BOARD


1 4 PB11032
DEMOD PWB
UL MARK
A
D
C
B
A
1
2
3
4
5
6
7
B1516
VR1501
R1519
R1515
R1514
CF1503
C1501
C1502
R1505
C1503
R1502
R1504
Q1501
L1501
C1508
R1542
R1501
R1539
R1503
R1534
C1541
C1544
L1504
C1546
C1547
C1550
X1502
R1537
D1502
L1505
R1543
R1538
D1503
C1551
B1508
B1507
IC1501
IC1502
IC1503
CF1504
C1512
C1511
R1518
C1509
R1517
R1516
C1515
C1539
W1506
C1505
C1506
C1536
C1507
T1501
C1523
C1516
R1506
C1513
C1514
C1519
R1525
R1524
C1517
C1518
B1513
C1520
R1530
R1532
C1504
C1521
R1520
B1514
X1501
R1523
R1522
C1531
R1531
R1529
CN1501
C1524
C1526
C1560
L1502
LC1501
B1530
B1517
C1529
C1530
C1528
LC1502
C1533
C1535
R1540
C1556
C1557
R1541
CN1502
C1525
C1561
C1538
C1540
C1542
C1543
R1535
C1545
C1548
W1507
B1515
B1504
R1528
R1527
W1510
R1536
C1552
W1508
C1549
W1509
C1532
B1510
B1511
W1511
C1553
C1554
B1505
C1537
C1534
8
1
30
35
40
50
52
27
26
20
15
10
11
5
1

COMPONENT PARTS LOCATION GUIDE < DEMODULATOR >

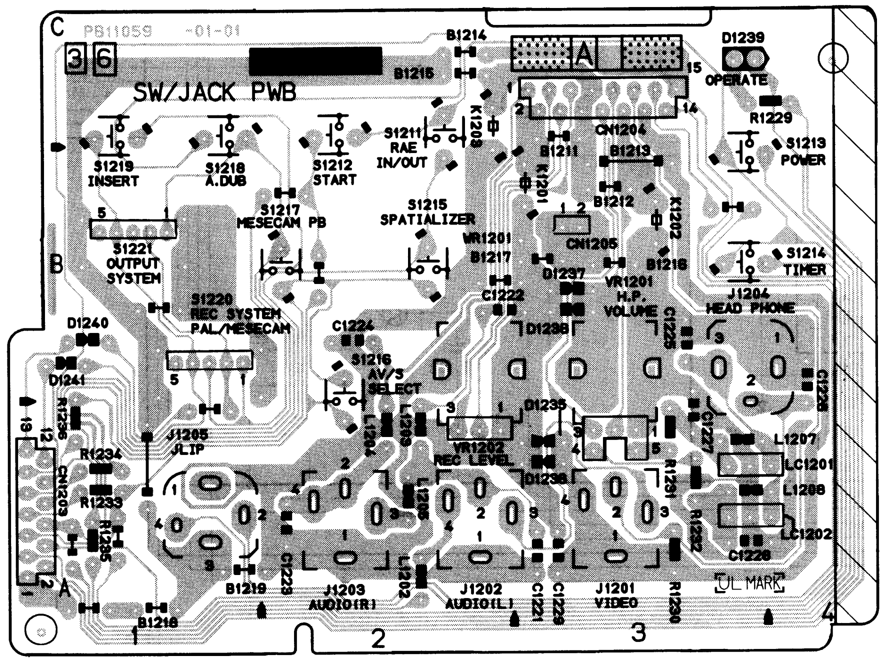
REF.NO.	LOCATION		
CAPACITOR			
C1501	B	C	1D
C1502	B	C	3D
C1503	B	C	3D
C1504	B	C	2B
C1505	A	D	1B
C1506	B	C	2C
C1507	A	D	2B
C1508	B	C	4D
C1509	B	C	2C
C1510	B	C	3C
C1511	B	C	2C
C1512	B	C	2C
C1513	B	C	2B
C1514	B	C	2B
C1515	A	D	3C
C1516	A	D	3B
C1517	A	D	1A
C1518	B	C	1A
C1519	B	C	1B
C1520	B	C	2A
C1521	B	C	2A
C1523	B	C	2B
C1524	A	D	4B
C1525	B	C	4B
C1526	A	D	4B
C1527	B	C	4B
C1528	A	D	5B
C1529	A	D	4B
C1530	A	D	5B
C1531	A	D	3A
C1532	B	C	5B
C1533	A	D	6B
C1534	B	C	6B
C1535	A	D	6B
C1536	A	D	1C
C1537	B	C	6B
C1538	B	C	4C
C1539	A	D	3C
C1540	B	C	4C
C1541	A	D	4D
C1542	B	C	4C
C1543	B	C	4C
C1544	A	D	4D
C1545	B	C	5C
C1546	A	D	5C
C1547	A	D	5D
C1548	B	C	5C
C1549	B	C	5C
C1550	A	D	5D
C1551	B	C	6C
C1552	B	C	5C
C1553	B	C	6C
C1554	B	C	6C
C1556	B	C	7A
C1557	B	C	7A
C1560	B	C	4B
C1561	B	C	4B
CONNECTOR			
CN1501	A	D	2A
CN1502	A	D	6A
DIODE			
D1502	B	C	6D
D1503	A	D	6C
IC			
IC1501	A	D	3C
IC1502	A	D	1B
IC1503	A	D	6B
COIL			
L1501	A	D	3D
L1502	A	D	4A
L1504	A	D	5D
L1505	A	D	6D
TRANSISTOR			
Q1501	A	D	3D
RESISTOR			
R1501	B	C	2D
R1502	B	C	2D
R1503	B	C	3D
R1504	B	C	3D
R1505	B	C	3D
R1506	B	C	3B
R1514	B	C	2C
R1515	B	C	2C
R1516	B	C	2C
R1517	B	C	2C
R1518	B	C	1C
R1519	B	C	1C
R1520	B	C	3B
R1521	B	C	2B
R1522	B	C	3B
R1523	B	C	3B
R1524	B	C	1A
R1525	B	C	1A
R1527	B	C	4B
R1528	B	C	4B
R1529	B	C	3A
R1530	B	C	2A
R1531	B	C	3A
R1532	B	C	2A
R1533	B	C	3C
R1534	B	C	4C
R1535	B	C	4C
R1536	B	C	5C
R1537	B	C	6D
R1538	B	C	6C
R1540	B	C	6A
R1541	B	C	6A
R1542	B	C	3D
R1543	A	D	6C
OTHERS			
CF1503	A	D	2D
CF1504	A	D	1C
LC1501	A	D	5A
LC1502	A	D	6A
T1501	A	D	2B
VR1501	A	D	1D
X1501	A	D	2A
X1502	A	D	6C

4.21 DISPLAY, SW/JACK, REC SAFETY AND CASSETTE SWITCH SCHEMATIC DIAGRAMS


DISPLAY
SW/JACK
CASS SW
REC SAFETY
DI1201
IC1201 UPD16312GB(P)
IC1202 GP1U281X
CN1202
CN1203
CN1201
CN1204
CN1205
J1201 VIDEO
J1202 AUDIO(L)
J1203 AUDIO(R)
J1204 HEAD PHONE
J1205 JLIP
VR1201 H.P. VOLUME
VR1202 REC LEVEL
S1206 PLAY
S1207 REW
S1208 FF
S1202 REC
S1203 PAUSE
S1204 SP/LP
S1205 STOP/EJECT
S1201 AUTO SP/LP
S1219 INSERT
S1218 A.DUB
S1215 SPATIALIZER
S1216 AV/S SELECT
S1217 MESECAM PB
S1211 RAE IN/OUT
S1212 START
S1213 POWER
S1214 TIMER
S1243 CASS
S1242 CASS
S1241 REC SAFE
TO SYSCON CN704 (Page 4-20)
TO AUDIO CN401 (Page 4-17)
TO AUDIO (Page 4-17)
TP1201 TEST
TP1202 GND
A
B
C
D
E
F
G
H
1
2
3
4
5

4.22 DISPLAY, SW/JACK, REC SAFETY, JOG/JOG AND CASSETTE SWITCH CIRCUIT BOARDS

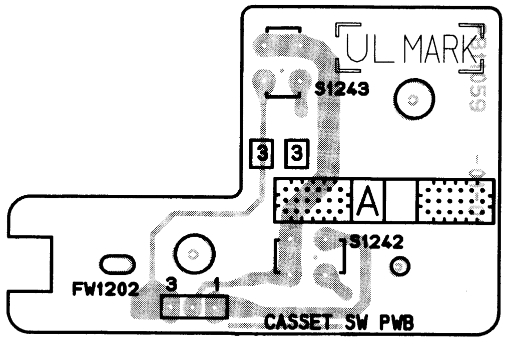
— SW/JACK —


PB11059 -01-01
SW/JACK PWB
S1219 INSERT
S1218 A.DUB
S1212 START
S1211 RAE IN/OUT
S1213 POWER
S1217 MESECAM PB
S1215 SPATIALIZER
S1214 TIMER
S1221 OUTPUT SYSTEM
S1220 REC SYSTEM PAL/MESECAM
S1216 AV/S SELECT
J1204 HEAD PHONE
VR1201 H.P. VOLUME
VR1202 REC LEVEL
J1205 A.I.P
J1203 AUDIO(R)
J1202 AUDIO(L)
J1201 VIDEO
D1239 OPERATE
CN1204
CN1205
CN1203
UL MARK

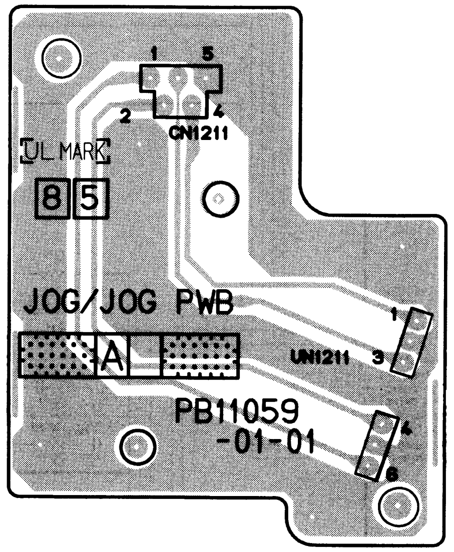
COMPONENT PARTS LOCATION GUIDE
< SW/JACK >

REF.NO.	LOCATION		
CAPACITOR			
C1221	A	D	3A
C1222	A	D	3B
C1223	A	D	2A
C1224	A	D	2B
C1225	A	D	3B
C1226	A	D	4A
C1227	A	D	3A
C1228	A	D	4A
C1229	A	D	3A
CONNECTOR			
CN1203	A	D	1A
CN1204	A	D	3C
CN1205	A	D	3B
DIODE			
D1235	A	D	3A
D1236	A	D	3A
D1237	A	D	3B
D1238	A	D	3B
D1239	A	D	3C
D1240	A	D	1B
D1241	A	D	1B
JACK			
J1201	A	D	3A
J1202	A	D	2A
J1203	A	D	2A
J1204	A	D	3B
J1205	A	D	1A
COIL			
L1202	A	D	2A
L1203	A	D	2A
L1204	A	D	2A
L1205	A	D	2A
L1207	A	D	3A
L1208	A	D	4A
RESISTOR			
R1229	A	D	4C
R1230	A	D	3A
R1231	A	D	3A
R1232	A	D	3A
R1233	A	D	1A
R1234	A	D	1A
R1235	A	D	1A
R1236	A	D	1A
SWITCH			
S1211	A	D	2C
S1212	A	D	2C
S1213	A	D	3B
S1214	A	D	3B
S1215	A	D	2B
S1216	A	D	2B
S1217	A	D	2B
S1218	A	D	1C
S1219	A	D	1C
S1220	A	D	1B
S1221	A	D	1B
OTHERS			
VR1201	A	D	3B
VR1202	A	D	2B
K1201	A	D	3B
K1202	A	D	3B
K1203	A	D	2B
LC1201	A	D	4A
LC1202	A	D	4A

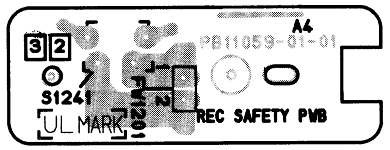
— CASSETTE SWITCH —


UL MARK
S1243
S1242
FW1202
CASSET SW PWB

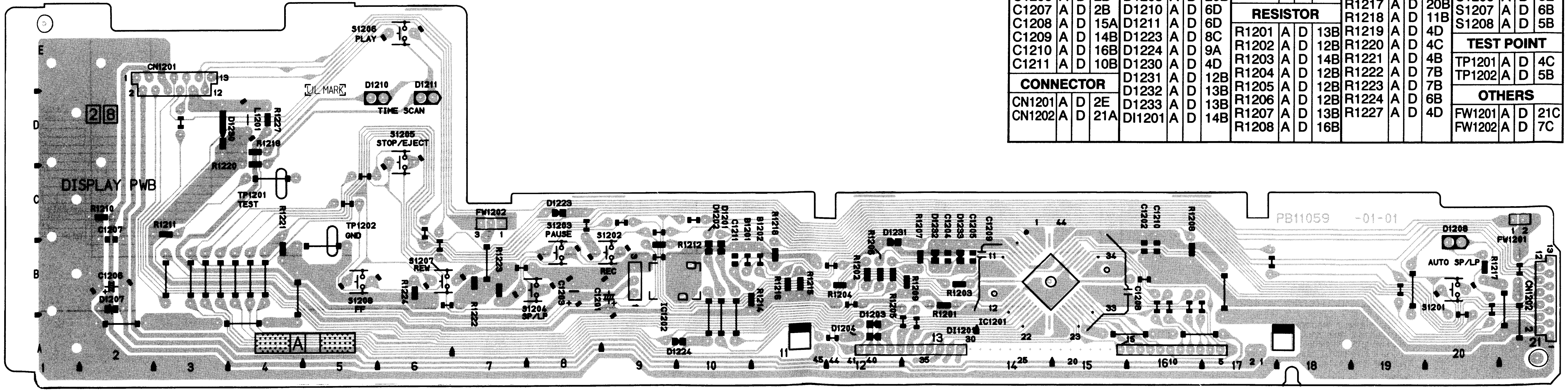
— JOG/JOG —


CN1211
UL MARK
JOG/JOG PWB
UN1211
PB11059 -01-01

— REC SAFETY —


PB11059-01-01
S1241
FW1201
UL MARK
REC SAFETY PWB

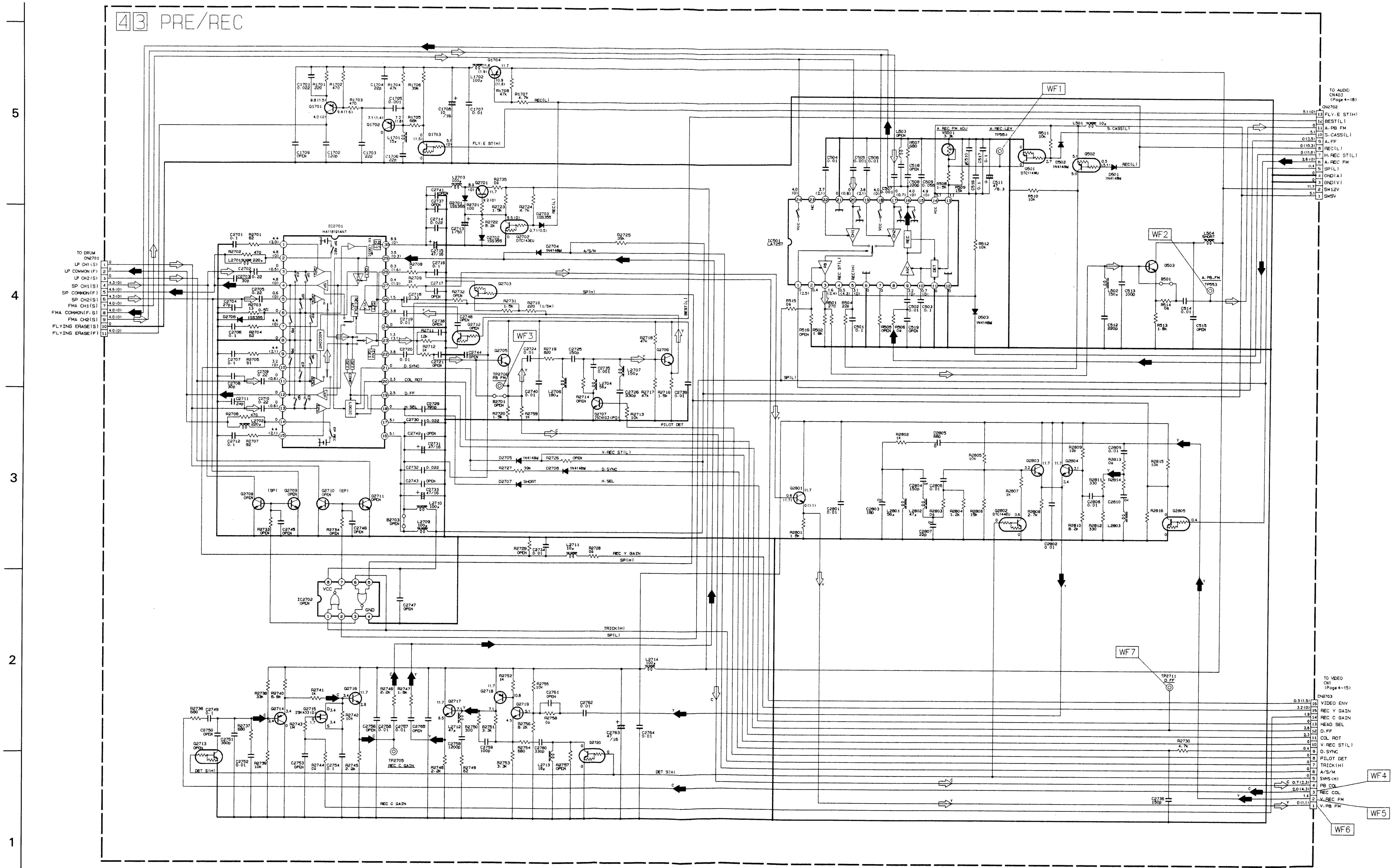
— DISPLAY —


DISPLAY PWB
CN1201
S1206 PLAY
D1210
D1211
TIME SCAN
S1205 STOP/EJECT
TP1201 TEST
TP1202 GND
FW1202
S1203 PAUSE
S1202
S1207 REW
S1208 FF
S1204 SP/LP
REC
IC1202
IC1201
UL MARK
AUTO SP/LP
S1201
FW1201
CN1202
PB11059 -01-01

COMPONENT PARTS LOCATION GUIDE < DISPLAY >

REF.NO.	LOCATION		
CAPACITOR			
C1201	A	D	9B
C1202	A	D	16B
C1203	A	D	8B
C1204	A	D	13B
C1205	A	D	14B
C1206	A	D	2B
C1207	A	D	2B
C1208	A	D	15A
C1209	A	D	14B
C1210	A	D	16B
C1211	A	D	10B
CONNECTOR			
CN1201	A	D	2E
CN1202	A	D	21A
DIODE			
D1201	A	D	10B
D1202	A	D	10B
D1203	A	D	12A
D1204	A	D	12A
D1207	A	D	2B
D1208	A	D	20B
D1210	A	D	6D
D1211	A	D	6D
D1223	A	D	8C
D1224	A	D	9A
D1230	A	D	4D
D1231	A	D	12B
D1232	A	D	13B
D1233	A	D	13B
DI1201	A	D	14B
IC			
IC1201	B	C	15B
IC1202	A	D	10B
COIL			
L1201	A	D	4D
L1203	A	D	15E
RESISTOR			
R1201	A	D	13B
R1202	A	D	12B
R1203	A	D	14B
R1204	A	D	12B
R1205	A	D	12B
R1206	A	D	12B
R1207	A	D	13B
R1208	A	D	16B
R1209	A	D	13B
R1210	A	D	2C
R1211	A	D	3C
R1212	A	D	10B
R1214	A	D	11A
R1215	A	D	11B
R1216	A	D	11B
R1217	A	D	20B
R1218	A	D	11B
R1219	A	D	4D
R1220	A	D	4C
R1221	A	D	4B
R1222	A	D	7B
R1223	A	D	7B
R1224	A	D	6B
R1227	A	D	4D
SWITCH			
S1201	A	D	20B
S1202	A	D	9B
S1203	A	D	8B
S1204	A	D	8B
S1205	A	D	6C
S1206	A	D	6E
S1207	A	D	6B
S1208	A	D	5B
TEST POINT			
TP1201	A	D	4C
TP1202	A	D	5B
OTHERS			
FW1201	A	D	21C
FW1202	A	D	7C

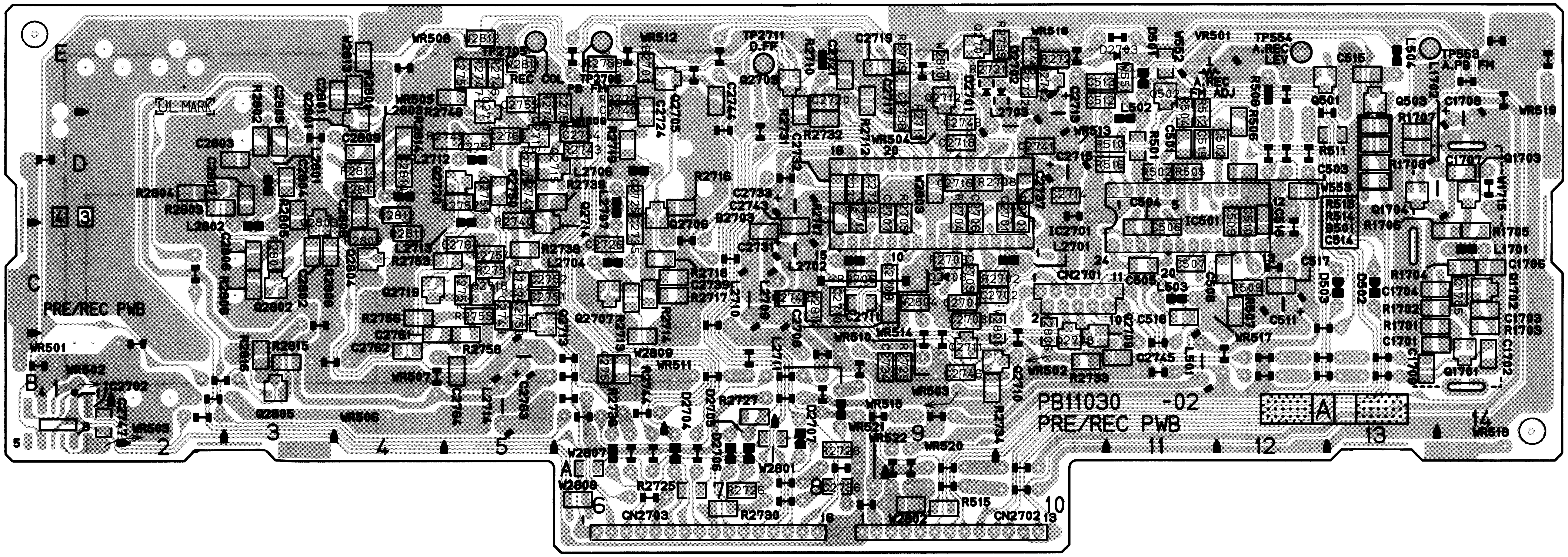
4.23 PRE/REC SCHEMATIC DIAGRAM


43 PRE/REC
TO DRUM CN2701
LP CH1(S)
LP COMMON(F)
LP CH2(S)
SP CH1(S)
SP COMMON(F)
SP CH2(S)
FMA CH1(S)
FMA COMMON(F.S)
FMA CH2(S)
FLYING ERASE(S)
FLYING ERASE(F)
IC2701 HA118191ANT
IC2702 OPEN
IC501 LA7257
TO AUDIO CN403 (Page 4-18)
CN2702
FLY-E ST(H)
BEST(L)
A.PB FM
S.CASS(L)
A.FF
REC(L)
H.REC ST(L)
A.REC FM
SP(L)
GND(A)
GND(V)
SW12V
SWSV
TO VIDEO CN1 (Page 4-15)
CN2703
VIDEO ENV
REC Y GAIN
REC C GAIN
HEAD SEL
D.FF
COL ROT
V.REC ST(L)
D.SYNC
PILOT DET
TRICK(H)
A/S/M
SVHS(H)
PB COL
REC COL
V.REC FM
V.PB FM
WF1
WF2
WF3
WF4
WF5
WF6
WF7
A.REC FM ADJ
A.REC LEV
TP554
A.PB FM TP553
TP9706 PB FM
TP2705 REC C GAIN
TP2711 D.FF
PILOT DET
DET S(H)
REC C GAIN
REC Y GAIN
TRICK(H)
SP(L)
SP(H)
V.REC ST(L)
D.SYNC
H.SEL
A/S/H
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTES : 1. UNLESS OTHERWISE SPECIFIED.
ALL NPN TYPE TRANSISTORS ARE 2SC4081 (QRS).
ALL PNP TYPE TRANSISTORS ARE 2SA1576 (QRS).
ALL NPN TYPE DIGITAL TRANSISTORS ARE DTC144WU.
ALL PNP TYPE DIGITAL TRANSISTORS ARE DTA144WU.

2. For PRE/REC waveforms, please refer to page 4-54.

4.24 PRE/REC CIRCUIT BOARD



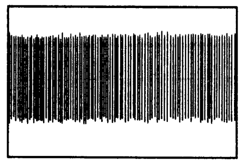
COMPONENT PARTS LOCATION GUIDE < PRE/REC >

REF.NO.	LOCATION		
CAPACITOR			
C501	B	C	11D
C502	B	C	12D
C503	B	C	12D
C504	B	C	11C
C505	B	C	11C
C506	B	C	11C
C507	B	C	11C
C508	B	C	12C
C509	B	C	12D
C510	B	C	12D
C511	A	D	12C
C512	B	C	11E
C513	B	C	11E
C514	B	C	13D
C515	B	C	13E
C516	B	C	12D
C517	B	C	12C
C518	B	C	11C
C519	B	C	11D
C1701	B	C	14B
C1702	B	C	14B
C1703	B	C	14C
C1704	B	C	14C
C1705	B	C	14C
C1706	B	C	14C
C1707	B	C	14D
C1709	B	C	13B
C2701	B	C	10D
C2702	B	C	10C
C2703	B	C	9C
C2704	B	C	9C
C2705	B	C	9C
C2706	B	C	9D
C2707	B	C	9D
C2708	B	C	9C
C2709	B	C	9C
C2710	B	C	8C
C2711	B	C	8C
C2712	B	C	8D
C2713	A	D	10E
C2714	B	C	10D
C2715	A	D	10D
C2716	B	C	9D
C2717	B	C	9E
C2718	B	C	9D
C2719	B	C	9E
C2720	B	C	8E
C2721	B	C	8E
C2724	B	C	6E
C2725	B	C	6D
C2726	B	C	6C
C2729	B	C	8D
C2730	B	C	8D
C2731	A	D	8C
C2732	B	C	8D
C2733	A	D	8D
C2734	B	C	9B
C2735	B	C	6C
C2736	B	C	8A
C2737	B	C	10D
C2738	B	C	9D
C2739	B	C	7C
C2740	B	C	6E
C2741	B	C	10D
C2742	B	C	8C
C2743	B	C	8C
C2744	B	C	7E
C2745	B	C	11B
C2746	B	C	9B
C2747	B	C	1B
C2748	B	C	9D
C2749	B	C	5C
C2750	B	C	5C
C2751	B	C	5C
C2752	B	C	5C
C2753	B	C	6B
C2754	B	C	6D
C2755	B	C	5E
C2756	B	C	6E
C2757	B	C	5E
C2758	B	C	5D
C2759	B	C	5D
C2760	B	C	5C
C2761	B	C	5B
C2762	B	C	4B
C2763	A	D	5B
C2764	B	C	5B
C2765	B	C	5D
C2801	B	C	4E
C2802	B	C	3C
C2803	B	C	3D
C2804	B	C	3D
C2805	B	C	3D
C2806	B	C	3C
C2807	B	C	3D
C2808	B	C	4D
C2809	B	C	4D
C2810	B	C	4D
CONNECTOR			
CN2701	A	D	10C
CN2702	A	D	8A
CN2703	A	D	6A
DIODE			
D501	A	D	11E
D502	A	D	13C
D503	A	D	13C
D2701	B	C	9E
D2702	B	C	10E
D2703	B	C	11E
D2704	A	D	7A
D2705	A	D	7A
D2706	A	D	7A
D2707	A	D	8A
D2708	B	C	9C
IC			
IC501	A	D	11D
IC2701	A	D	10C
IC2702	B	C	1B
COIL			
L501	A	D	11B
L502	A	D	11D
L503	A	D	11C
L504	A	D	13E
L1701	A	D	14C
L1702	A	D	14D
L2701	A	D	10C
L2702	A	D	8C
L2703	A	D	10D
L2704	A	D	6C
L2706	A	D	7D
L2707	A	D	6C
L2709	A	D	8C
L2710	A	D	7C
L2711	A	D	8B
L2712	A	D	5D
L2713	A	D	5D
L2714	A	D	5B
L2801	A	D	3D
L2802	A	D	3C
L2803	A	D	4D
TRANSISTOR			
Q501	B	C	13E
Q502	B	C	11E
Q503	B	C	13E
Q1701	B	C	14B
Q1702	B	C	14C
Q1703	B	C	14D
Q1704	B	C	13D
Q2701	B	C	9E
Q2702	B	C	10E
Q2703	B	C	8E
Q2705	B	C	7E
Q2706	B	C	7D
Q2707	B	C	6C
Q2708	B	C	10B
Q2709	B	C	10B
Q2710	B	C	10B
Q2711	B	C	9B
Q2712	B	C	9E
Q2713	B	C	5C
Q2714	B	C	6D
Q2715	B	C	6D
Q2716	B	C	5D
Q2717	B	C	5E
Q2718	B	C	5C
Q2719	B	C	4C
Q2720	B	C	5D
Q2801	B	C	4D
Q2802	B	C	3C
Q2803	B	C	3D
Q2804	B	C	4C
Q2805	B	C	3B
RESISTOR			
R501	B	C	11D
R502	B	C	11D
R504	B	C	11D
R505	B	C	11D
R506	B	C	12D
R507	B	C	12C
R508	A	D	12D
R509	B	C	12C
R510	B	C	11D
R511	B	C	13D
R512	B	C	11D
R513	B	C	13D
R514	B	C	13D
R515	B	C	9A
R516	B	C	11D
R1701	B	C	14C
R1702	B	C	14C
R1703	B	C	14C
R1704	B	C	14C
R1705	B	C	14C
R1706	B	C	14C
R1707	B	C	13D
R1708	B	C	13D
R2701	B	C	10D
R2702	B	C	10C
R2703	B	C	9C
R2704	B	C	9D
R2705	B	C	9D
R2706	B	C	8C
R2707	B	C	8D
R2708	B	C	10D
R2709	B	C	9E
R2710	A	D	8E
R2711	B	C	9D
R2712	B	C	8E
R2713	B	C	6C
R2714	B	C	6C
R2716	B	C	7D
R2717	B	C	7C
R2718	B	C	7C
R2719	B	C	6D
R2720	B	C	6E
R2721	B	C	10E
R2722	B	C	10E
R2723	B	C	10E
R2724	B	C	10E
R2725	B	C	7A
R2726	B	C	7A
R2727	B	C	7B
R2728	B	C	8A
R2729	B	C	9B
R2730	B	C	7A
R2731	B	C	8E
R2732	B	C	8D
R2733	B	C	10B
R2734	B	C	10B
R2735	B	C	10E
R2736	A	D	6A
R2737	B	C	5C
R2738	B	C	5C
R2739	B	C	6D
R2740	B	C	5D
R2741	B	C	5D
R2742	B	C	5D
R2743	B	C	6D
R2744	B	C	6B
R2745	B	C	6E
R2746	B	C	5E
R2747	B	C	5E
R2748	B	C	5E
R2749	B	C	5D
R2750	B	C	5D
R2751	B	C	5C
R2752	B	C	5C
R2753	B	C	5C
R2754	B	C	5C
R2755	B	C	5C
R2756	B	C	4C
R2757	B	C	5D
R2758	B	C	5B
R2759	B	C	6E
R2801	B	C	4E
R2802	B	C	3D
R2803	B	C	3D
R2804	B	C	2D
R2805	B	C	3D
R2806	B	C	3C
R2807	B	C	3C
R2808	B	C	4C
R2809	B	C	4C
R2810	B	C	4C
R2811	B	C	4D
R2812	B	C	4D
R2813	B	C	4D
R2814	B	C	4D
R2815	B	C	3B
R2816	B	C	3B
TEST POINT			
TP553	A	D	14E
TP554	A	D	12E
TP2705	A	D	5E
TP2706	A	D	6E
TP2711	A	D	7E
OTHERS			
VR501	A	D	12E
WR502	A	D	1B
WR503	A	D	1A

WAVEFORMS

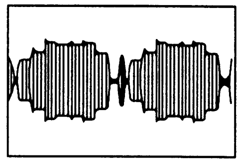
— PRE/REC —

WF1 TP554 A. REC FM



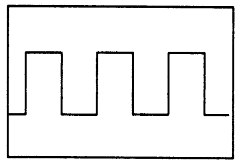
REC 0.03 Vp-p
20 mV/1 msec/DIV

WF4 CN2703-3 REC COLOR



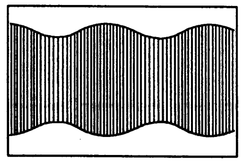
REC 0.63 Vp-p
20 mV/20 µsec/DIV

WF7 TP2711 D. FF



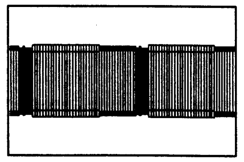
REC/PB 5.8 Vp-p
0.2 V/10 msec/DIV

WF2 TP553 A. PB FM



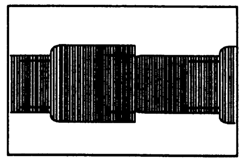
PB 1.1 Vp-p
5 mV/1 msec/DIV

WF5 CN2703-2 V. REC FM



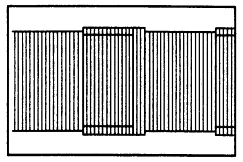
REC 0.4 Vp-p
10 mV/5 msec/DIV

WF3 TP2706 PB FM



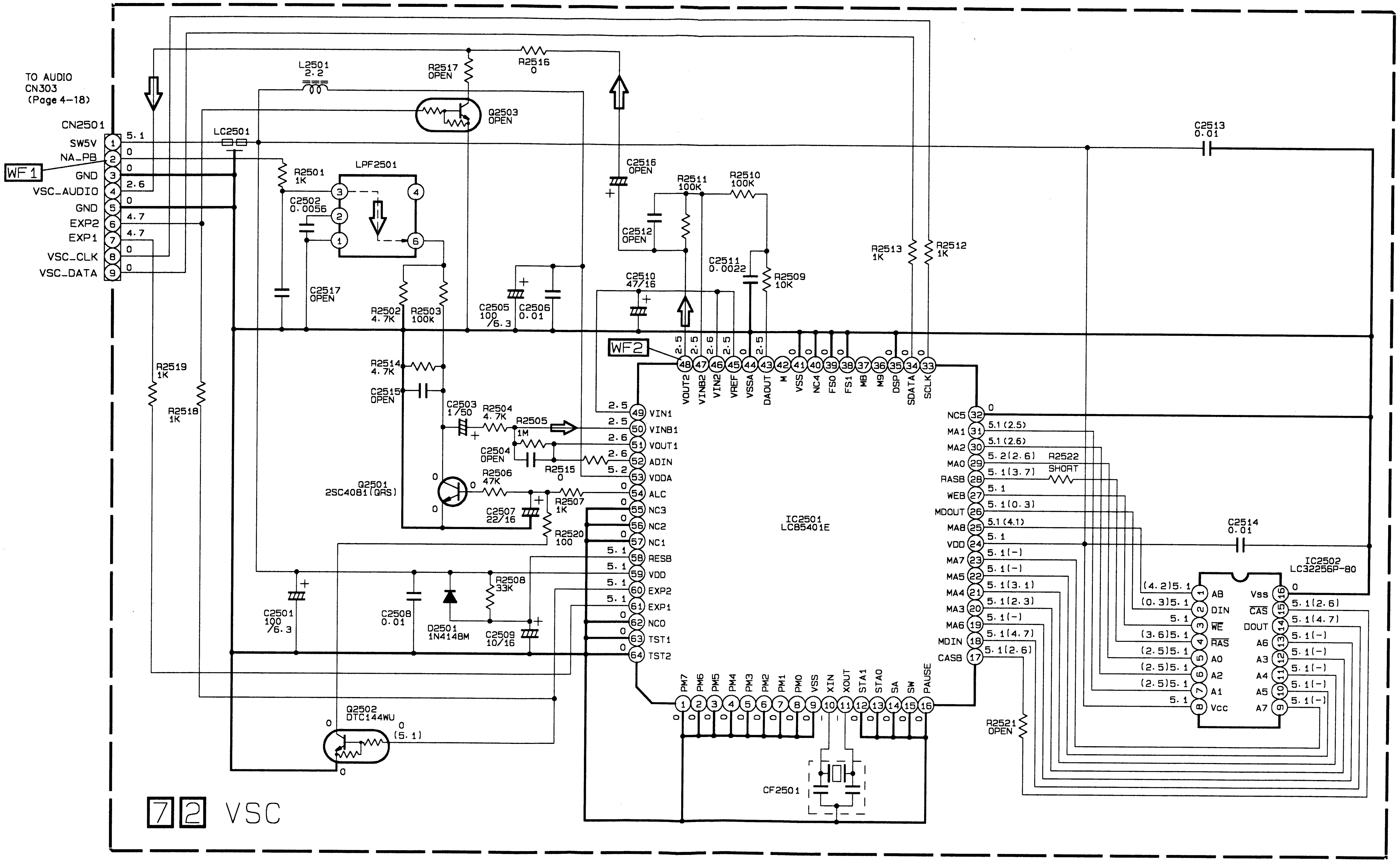
PB 0.6 Vp-p
20 mV/5 msec/DIV

WF6 CN2703-1 V. PB FM



PB 0.4 Vp-p
20 mV/5 msec/DIV

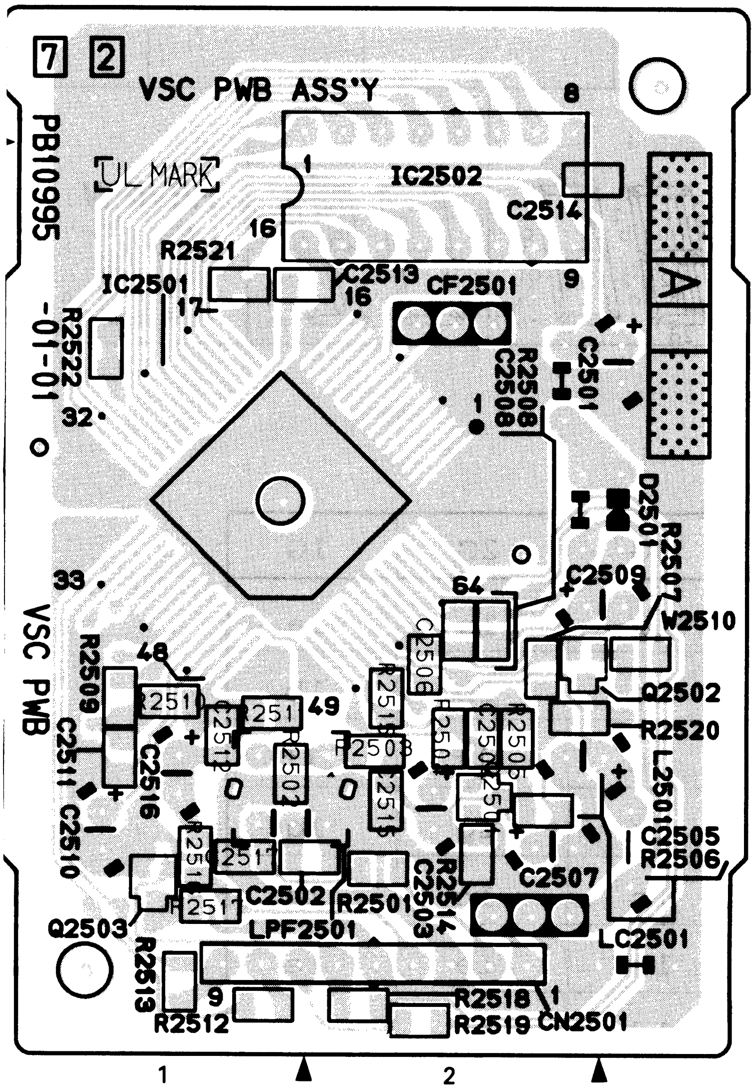
4.25 VSC SCHEMATIC DIAGRAM


TO AUDIO
CN303
(Page 4-18)
CN2501
SW5V
NA_PB
GND
VSC_AUDIO
GND
EXP2
EXP1
VSC_CLK
VSC_DATA
WF1
WF2
L2501 2.2
LC2501
R2517 OPEN
R2516 0
Q2503 OPEN
R2501 1K
C2502 0.0056
LPF2501
C2517 OPEN
R2502 4.7K
R2503 100K
C2505 100 /6.3
C2506 0.01
C2516 OPEN
C2512 OPEN
R2511 100K
R2510 100K
C2511 0.0022
R2509 10K
C2510 47/16
R2513 1K
R2512 1K
C2513 0.01
R2519 1K
R2518 1K
R2514 4.7K
C2515 OPEN
C2503 1/50
R2504 4.7K
R2505 1M
C2504 OPEN
R2506 47K
R2515 0
Q2501 2SC4081(QRS)
C2507 22/16
R2507 1K
R2520 100
C2501 100 /6.3
C2508 0.01
D2501 1N4148M
R2508 33K
C2509 10/16
Q2502 DTC144WU
(5.1)
IC2501 LC85401E
VIN1
VINB1
VOUT1
ADIN
VDDA
ALC
NC3
NC2
NC1
RESB
VDD
EXP2
EXP1
NCO
TST1
TST2
VOUT2
VINB2
VIN2
VREF
VSSA
DADUT
M
VSS
NC4
FS0
FS1
MB
M9
DSP
SDATA
SCLK
NC5
MA1
MA2
MA0
RASB
WEB
MDOUT
MA8
VDD
MA7
MA5
MA4
MA3
MA6
MDIN
CASB
PM7
PM6
PM5
PM4
PM3
PM2
PM1
PM0
VSS
XIN
XOUT
STA1
STA0
SA
SW
PAUSE
R2522 SHORT
C2514 0.01
R2521 OPEN
CF2501
IC2502 LC32256P-80
A8
DIN
WE
RAS
A0
A2
A1
Vcc
Vss
CAS
DOUT
A6
A3
A4
A5
A7
5.1(2.5)
5.1(2.6)
5.2(2.6)
5.1(3.7)
5.1(0.3)
5.1(4.1)
5.1(3.1)
5.1(2.3)
5.1(4.7)
5.1(2.6)
(4.2)5.1
(0.3)5.1
(3.6)5.1
(2.5)5.1
5.1(-)
7 2 VSC

NOTE : For VSC waveforms, please refer to page4-57.

4.26 VSC CIRCUIT BOARD

— VSC —



7
2
VSC PWB ASS'Y
PB10995
-01-01
UL MARK
IC2502
IC2501
C2514
R2521
C2513
CF2501
R2522
C2501
R2508
C2508
D2501
R2507
C2509
W2510
Q2502
R2520
L2501
C2505
R2506
C2507
LC2501
CN2501
R2519
R2518
R2512
R2513
Q2503
LPF2501
C2502
R2501
C2503
R2514
C2510
C2511
C2516
R2509
VSC PWB
A
1
8
9
16
17
32
33
48
49
64
1
2

COMPONENT PARTS LOCATION GUIDE <VSC>

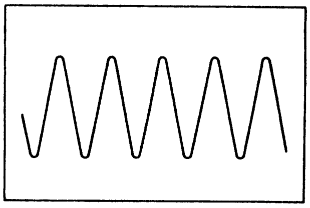
REF.NO.	LOCATION		
CAPACITOR			
C2501	A	D	3C
C2502	B	C	2A
C2503	A	D	2A
C2504	B	C	2B
C2505	A	D	2A
C2506	B	C	2B
C2507	A	D	2A
C2508	B	C	2B
C2509	A	D	2B
C2510	A	D	1A
C2511	B	C	1A
C2512	B	C	1B
C2513	B	C	1C
C2514	B	C	2C
C2515	B	C	2A
C2516	A	D	1A
C2517	B	C	1A
CONNECTOR			
CN2501	A	D	2A
DIODE			
D2501	A	D	3B
IC			
IC2501	B	C	1B
IC2502	A	D	1D
COIL			
L2501	A	D	3A

REF.NO.	LOCATION		
TRANSISTOR			
Q2501	B	C	2A
Q2502	B	C	2B
Q2503	B	C	1A
RESISTOR			
R2501	B	C	2A
R2502	B	C	1A
R2503	B	C	2B
R2504	B	C	2B
R2505	B	C	2B
R2506	B	C	2A
R2507	B	C	2B
R2508	B	C	2B
R2509	B	C	1B
R2510	B	C	1B
R2511	B	C	1B
R2512	B	C	1A
R2513	B	C	1A
R2514	B	C	2A
R2515	B	C	2B
R2516	B	C	1A
R2517	B	C	1A
R2518	B	C	2A
R2519	B	C	2A
R2520	B	C	2B
R2521	B	C	1C
R2522	B	C	1C
OTHER			
CF2501	A	D	2C
LC2501	A	D	2A
LPF2501	A	D	2A

WAVEFORMS

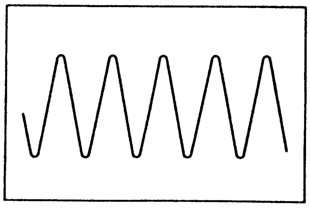
— VSC —

WF1 CN2501-2



PB0.8Vp-p
50mV/1msec/DIV

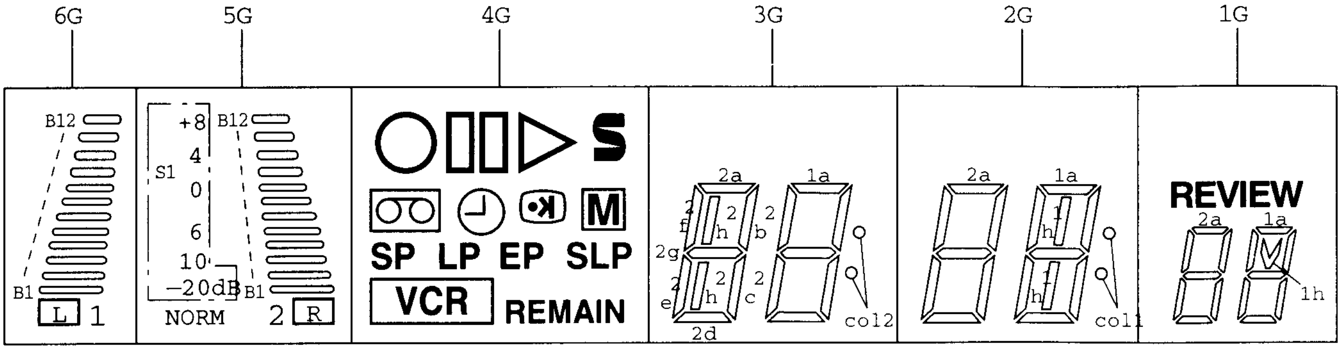
WF2 IC2501-48



PB1.5Vp-p
50mV/1msec/DIV

4.27 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT


6G
5G
4G
3G
2G
1G
B12
B1
L
1
+8
4
S1
0
6
10
−20dB
NORM
2
R
SP
LP
EP
SLP
VCR
REMAIN
2a
1a
f
2
h
b
2g
e
c
2d
col2
col1
REVIEW
1h

ANODE CONNECTION

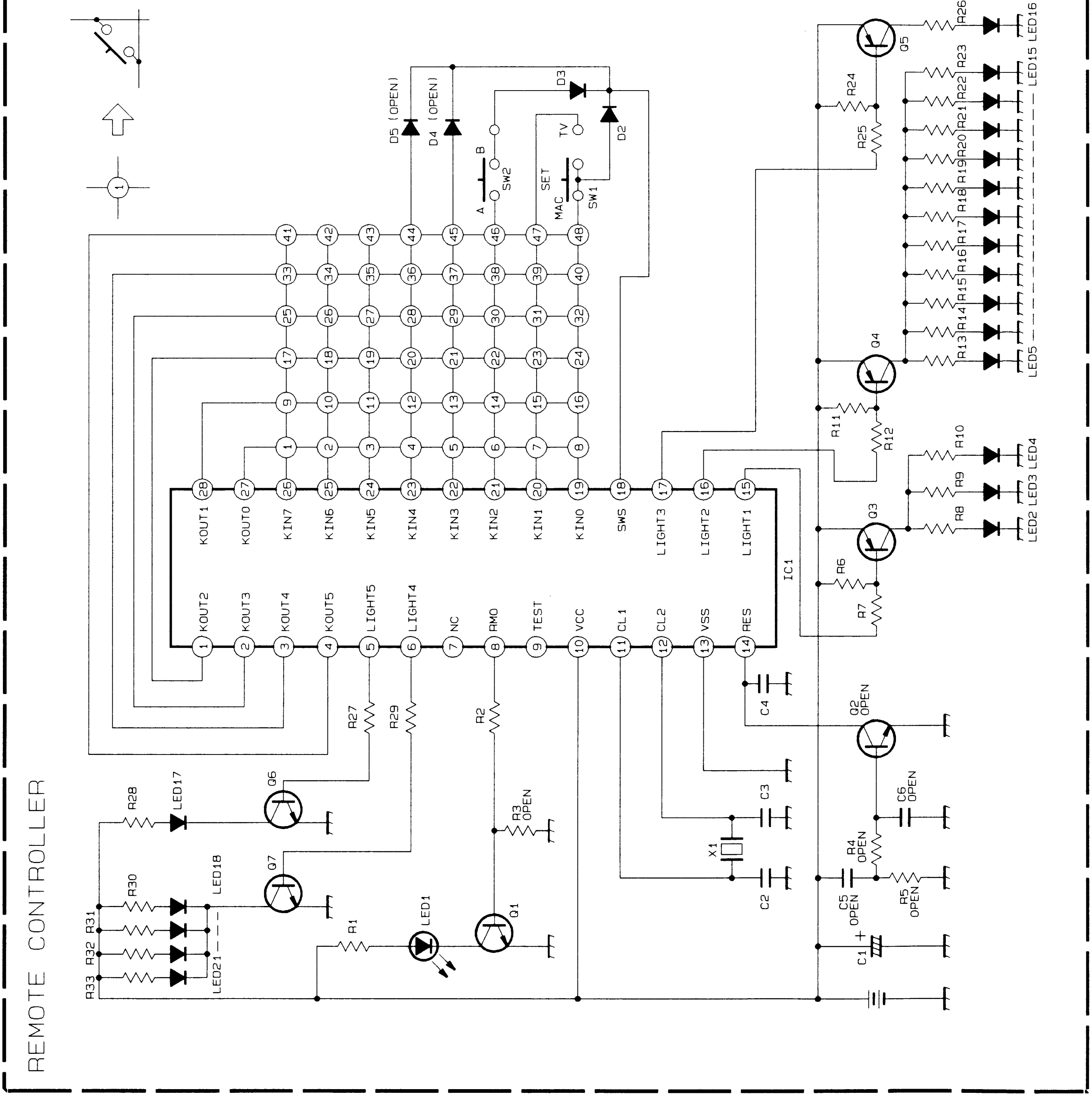
	6G	5G	4G	3G	2G	1G
P 1		S1	○	1a	1a	1a
P 2		NORM	▯▯	1b	1b	1b
P 3	1	2	▷	1f	1f	1f
P 4	L	R	🕘	1g	1g	1g
P 5	B12	B12	•K	1c	1c	1c
P 6	B11	B11	M	1e	1e	1e
P 7	B10	B10	📼	1d	1d	1d
P 8	B9	B9	VCR	col2	1h	1h
P 9	B8	B8	SP	2a	2a	2a
P10	B7	B7	LP	2b	2b	2b
P11	B6	B6	EP	2f	2f	2f
P12	B5	B5	SLP	2g	2g	2g
P13	B4	B4	REMAIN	2c	2c	2c
P14	B3	B3	S	2e	2e	2e
P15	B2	B2	—	2d	2d	2d
P16	B1	B1	—	2h	col1	REVIEW

4.28 REMOTE CONTROL SCHEMATIC DIAGRAM

NOTES:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.

Key No.	Key Name
1	PUSH JOG >>
2	-
3	R.A.EDIT
4	SCENE FINDER
5	PROG CHECK
6	7
7	8
8	9
9	ILLUMI GUIDE
10	TV PROG+
11	CURSOR+/TV VOL+
12	PROG/MENU
13	OK
14	CANCEL
15	0
16	TIMER
17	OPERATE
18	-
19	AUDIO MONITOR
20	-/--
21	TV/VCR
22	RE_VIEW
23	CH SEARCH
24	CH STORE
25	STOP-
26	DATE+
27	DATE-
28	START-
29	TV PROG-
30	C.MEMORY
31	DISPLAY
32	SPATIALIZER
33	START+
34	PUSH JOG >>
35	PLAY
36	REW
37	FF
38	1
39	2
40	3
41	CURSOR-/TV PROG-
42	STOP+
43	STOP
44	REC
45	PAUSE
46	4
47	5
48	6
44+35	REC START
44+45	REC PAUSE

PEAC0505

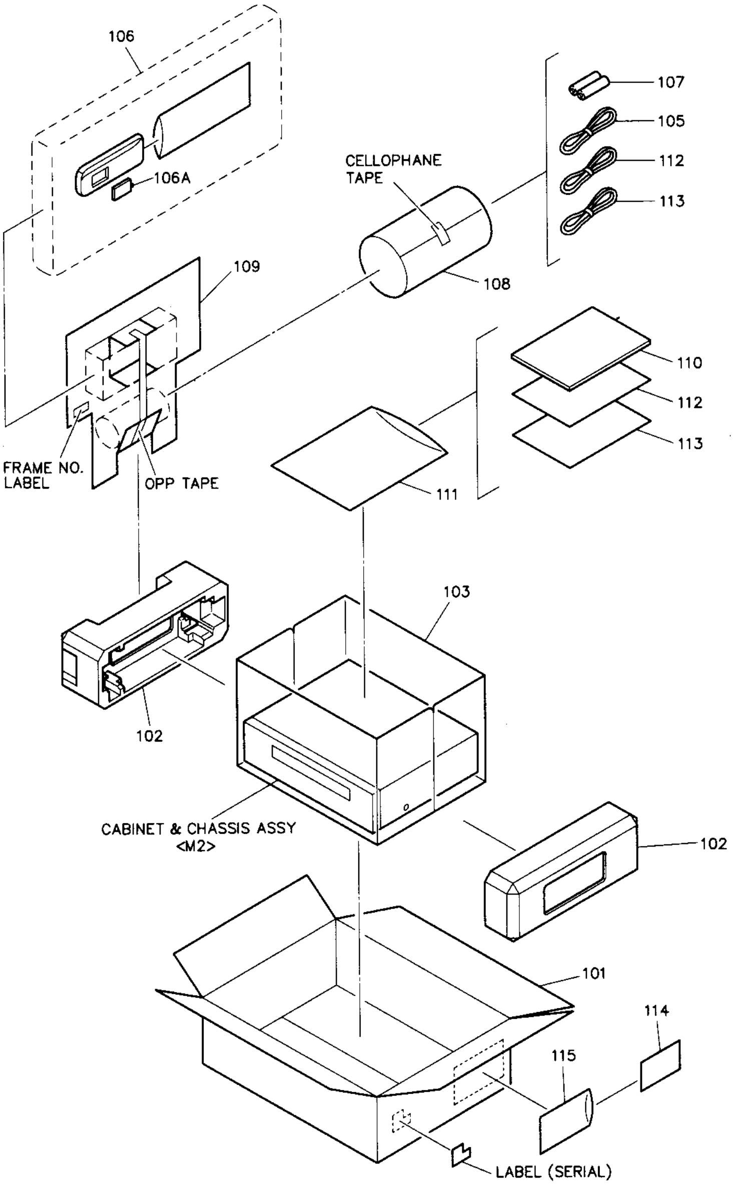

REMOTE CONTROLLER
IC1
KOUT1
KOUT0
KIN7
KIN6
KIN5
KIN4
KIN3
KIN2
KIN1
KIN0
SWS
LIGHT3
LIGHT2
LIGHT1
KOUT2
KOUT3
KOUT4
KOUT5
LIGHT5
LIGHT4
NC
RMO
TEST
VCC
CL1
CL2
VSS
RES
D5 (OPEN)
D4 (OPEN)
D3
D2
SW1
SW2
A
B
SET
MAC
TV
Q1
Q2 OPEN
Q3
Q4
Q5
Q6
Q7
R1
R2
R3 OPEN
R4 OPEN
R5 OPEN
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
R28
R29
R30
R31
R32
R33
C1
C2
C3
C4
C5 OPEN
C6 OPEN
X1
LED1
LED2
LED3
LED4
LED5
LED15
LED16
LED17
LED18
LED21
1

SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>


106
106A
CELLOPHANE TAPE
107
105
112
113
109
108
110
112
113
FRAME NO. LABEL
OPP TAPE
111
103
102
CABINET & CHASSIS ASSY <M2>
102
101
114
115
LABEL (SERIAL)

****

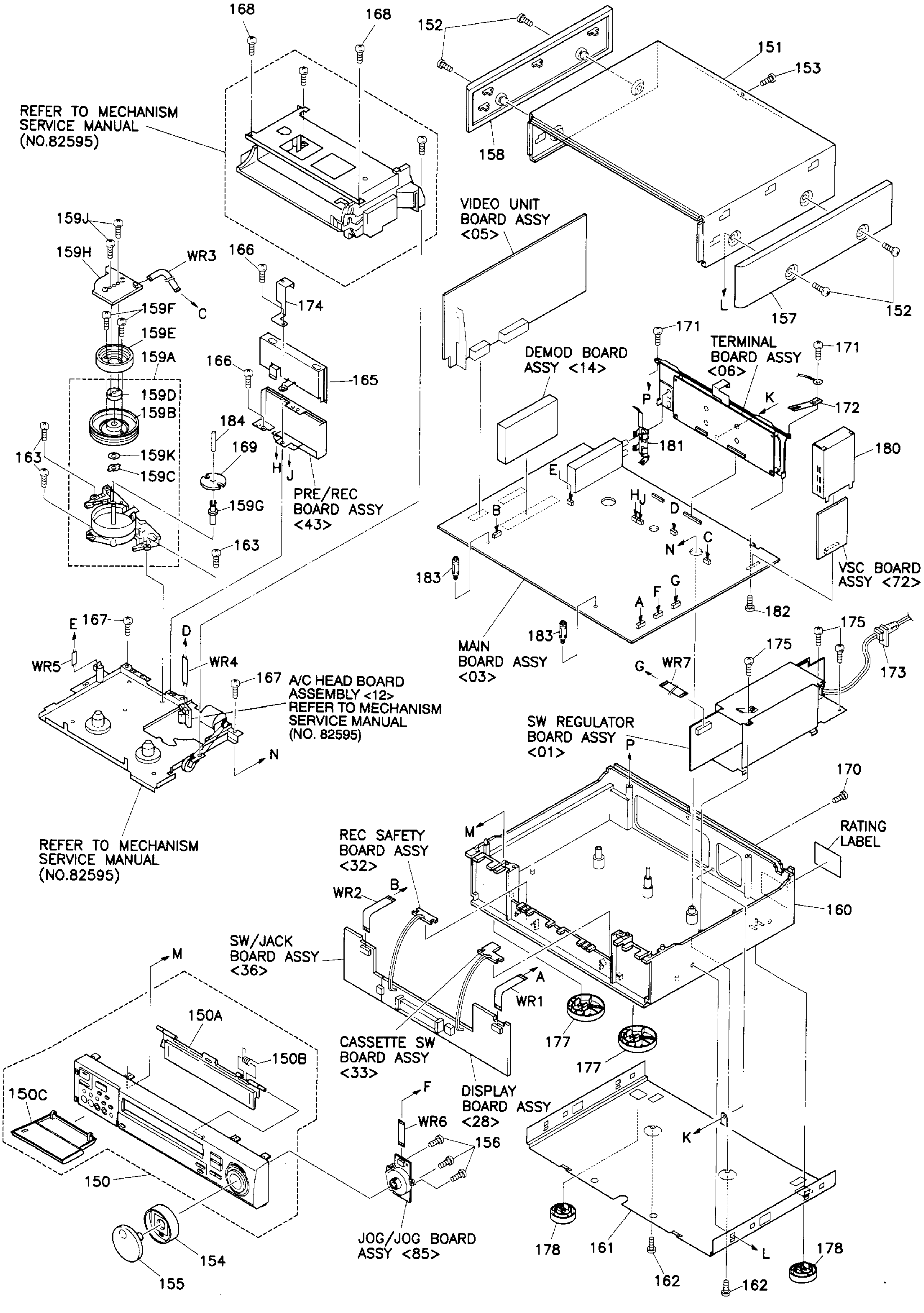
PACKING AND ACCESSORY ASSEMBLY <M1>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		101	LP30268-001A	PACKING CASE
		102	PQ35548A-3	CUSHION ASSY
		103	PQM30021-95	POLY BAG
		105	PEAC0300-02	RF CABLE
		106	PQ21953S	REMOTE CONTROLLER
		106A	PQ46614-2	COVER(BATTERY)
		107	R6PRPA-2ST	BATTERY,X2
		108	QPC02202215P	POLY BAG
		109	PQ35575-1-1	SHEET,REMOTE CONTROLLER
	⚠	110	LPT0002-070A	INST.BOOK(EN)
	⚠		LPT0002-071A	INST.BOOK(GE)
	⚠		LPT0002-072A	INST.BOOK(FR)
	⚠		LPT0002-073A	INST.BOOK(IT)
	⚠		LPT0002-075A	INST.BOOK(DU)
	⚠		LPT0002-081A	INST.BOOK(GR)
		111	QPC02503515P	POLY BAG
		112	PU60111	S CABLE
		113	PU56142-5	PIN CORD ASSY
		114	BT-20135	WARRANTY CARD
		115	PQ33909	POLY BAG

5.2 CABINET AND CHASSIS ASSEMBLY <M2>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.


168
168
152
151
153
REFER TO MECHANISM SERVICE MANUAL (NO.82595)
158
VIDEO UNIT BOARD ASSY <05>
159J
159H
WR3
166
C
174
152
157
L
159F
159E
159A
166
165
159D
159B
184
169
159K
159C
163
163
H
J
159G
PRE/REC BOARD ASSY <43>
DEMOD BOARD ASSY <14>
171
TERMINAL BOARD ASSY <06>
171
P
K
172
181
180
E
HJ
D
B
N
C
183
VSC BOARD ASSY <72>
A
F
G
182
E
167
D
WR5
WR4
167
A/C HEAD BOARD ASSEMBLY <12> REFER TO MECHANISM SERVICE MANUAL (NO. 82595)
N
MAIN BOARD ASSY <03>
183
175
175
173
G
WR7
SW REGULATOR BOARD ASSY <01>
P
170
REFER TO MECHANISM SERVICE MANUAL (NO.82595)
REC SAFETY BOARD ASSY <32>
M
RATING LABEL
WR2
B
160
SW/JACK BOARD ASSY <36>
M
A
WR1
150A
150B
177
177
CASSETTE SW BOARD ASSY <33>
150C
F
DISPLAY BOARD ASSY <28>
WR6
156
K
150
154
155
JOG/JOG BOARD ASSY <85>
178
161
162
L
178
162

****

CABINET AND CHASSIS ASSEMBLY <M2>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	150	PQ11926N-15	FRONT PANEL ASSY
	150A	PQ21873-14-5	CASSETE HOUSING DOOR
	150B	PQ46448	TORSION SPRING
	150C	PQ21964N	DOOR ASSY
⚠	151	PQ11922-13	TOP COVER
	152	PQ43930	SPECIAL SCREW,X4 TOP COVER(SIDE)
	153	SDSF3010M	SCREW,TOP COVER(REAR)
	154	PQ34858L	KNOB(JOG)ASSY
	155	PQ35524	KNOB(SHUTTLE)
	156	SDSF2608Z	SCREW,X3 JOG
	157	PQ11937-1-4	SIDE PANEL(R)
	158	PQ35561A-4	SIDE PANEL(L)ASSY
	159A	PDM2301N	DRUM SUB ASSY
	159B	PDM3353BJ	UPPER DRUM ASSY
	159C	PDM4440A	BRUSH ASSY
	159D	PDM4345A	COLLAR ASSY
	159E	PDZ0179	ROTOR ASSY
	159F	SPSH2660Z	SCREW,X2
	159G	PDM4311A-1	ROLLER ASSY
⚠	159H	PDZ0181-2	STATOR ASSY
	159J	PDM4434	SPECIAL SCREW,X2
	159K	PDM4050-9	WASHER
⚠	160	PQ11920-2-7	BOTTOM CHASSIS
⚠	161	PQ11921-1-2	BOTTOM COVER
	162	SDSF3010Z	SCREW,X2 BOTTOM COVER
	163	PQ46808	SPECIAL SCREW,X3 DRUM
	165	LP20002-001B	SHIELD CASE,PRE
	166	SDST2606Z	SCREW,X2 PRE
	167	SDSF4012Z	SCREW,X2 MECHA
	168	SDSF3010Z	SCREW,X2 CASS HOUSING
	169	PQ45160	INERTIA PLATE
	170	SDSF3010M	SCREW,TERMINAL
	171	GPSF3010Z	SCREW,X2 TERMINAL
	172	PQ41556	EARTH PLATE,TERMINAL
⚠	173	QMPK040-170-K	POWER CORD
	174	LP40054-001A	BRACKET,PRE
	175	SDSF3010Z	SCREW,X3 SW.REG
	177	PQ46617A	FOOT ASSY,X2
	178	PQ35504	FOOT(2),X2
	180	PQ35567	SHIELD CASE,VSC
	181	PQ21623-1-2	EARTH PLATE(RF)
	182	SDSF3008Z	SCREW,TERMINAL
	183	PEME0947-01-01	SPACER,X2
	184	LP40058-001B	PIN
	WR1	PW30802-1319	WIRE,DISPLAY/SW
	WR2	PW30802-1516	FFC WIRE,SW/JACK
	WR3	PW30803-0426	FFC WIRE,DRUM
	WR4	PW30101-C0HH887	WIRE,A/C HEAD
	WR5	PW30101-D0HH882	WIRE,FE HEAD
	WR6	PW30803-0520	FFC WIRE,JOG
	WR7	PW30803-1818	FFC WIRE,SW.REG

⚠ REF No. PART No. PART NAME, DESCRIPTION

For the MECHANISM ASSY and CASSETTE HOUSING ASSY parts list, Please refer to the MECHANISM ASSEMBLY of the service manual (No. 82595)

5.3 ELECTRICAL PARTS LIST

****

SW REG BOARD ASSEMBLY <01>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PW1	PB11001C	SW REG BOARD ASSEMBLY	
	Q1	2SK2632-CB14	FE TRANSISTOR	
		or 2SK2666F04	FE TRANSISTOR	
		or 2SK2129-LT	FE TRANSISTOR	
	Q2	2SC3616(ML)	TRANSISTOR	
	Q51	2SC1740S(RS)	TRANSISTOR	
		or 2SC3199(GB)-TJK	TRANSISTOR	
	D1	1SR139-600-T2	DIODE	
	D2	1SR139-600-T2	DIODE	
	D3	1SR139-600-T2	DIODE	
	D4	1SR139-600-T2	DIODE	
	D5	RD27ES-T1B2	ZENER DIODE	
		or UZ27BSB	ZENER DIODE	
		or MTZJ27(B)	ZENER DIODE	
	D6	ERA18-04-T2	FR DIODE	
		or AU01	FR DIODE	
		or 1SR153-400-T2	FR DIODE	
	D7	ERA18-04-T2	FR DIODE	
		or 1SR153-400-T2	FR DIODE	
		or AU01	FR DIODE	
	D9	1N4148M	DIODE	
		or 1SS133	DIODE	
	D51	AU01Z	FR DIODE	
		or ERA18-02-T2	FR DIODE	
		or 1SR153-200-T2	FR DIODE	
		or 10ELS2	FR DIODE	
	D52	MA644	FR DIODE	
		or YG901C2	FR DIODE	
		or FCF06A20	FR DIODE	
		or FML-12S	FR DIODE	
	D53	FMB-24	BARRIER DIODE	
		or F5KQ40B	BARRIER DIODE	
		or MA7D49	SB DIODE	
		or YG801C04	SB DIODE	
	D55	RD15ES-T1B1	ZENER DIODE	
		or UZ15BSA	ZENER DIODE	
	D57	AU01Z	FR DIODE	
		or ERA18-02-T2	FR DIODE	
		or 1SR153-200-T2	FR DIODE	
		or 10ELS2	FR DIODE	
	D60	AU01	FR DIODE	
		or ERA18-04-T2	FR DIODE	
		or 1SR153-400-T2	FR DIODE	
		or 10ELS4	FR DIODE	
	D61	AU01Z	FR DIODE	
		or ERA18-02-T2	FR DIODE	
		or 1SR153-200-T2	FR DIODE	
		or 10ELS2	FR DIODE	
	D63	RD27ES-T1B2	ZENER DIODE	
		or UZ27BSB	ZENER DIODE	
		or MTZJ27(B)	ZENER DIODE	
	D65	1N4148M	DIODE	
		or 1SS133	DIODE	
	D66	RD10ES-T1B3	ZENER DIODE	
		or MTZJ10(C)	ZENER DIODE	
		or UZ10BSC	ZENER DIODE	
	D67	RD6.2ES-T1B3	ZENER DIODE	
		or UZ6.2BSC	ZENER DIODE	
	R1	QRD161J-334	RESISTOR	330kΩ,1/6
	R2	QRD161J-334	RESISTOR	330kΩ,1/6
	R3	QRD161J-683	RESISTOR	68kΩ,1/6
	R4	QRE121J-331Y	RESISTOR	330Ω,1/2
	R5	QRX014J-R39	MF RESISTOR	0.39Ω,1
	R6	QRD161J-681	RESISTOR	680Ω,1/6
	R8	QRG029J-154G	OMF RESISTOR	150kΩ,2
	R9	QRD161J-224	RESISTOR	220kΩ,1/6
	R10	QRD161J-222	RESISTOR	2.2kΩ,1/6
	R11	QRD161J-152	RESISTOR	1.5kΩ,1/6
	R12	QRG029J-154G	OMF RESISTOR	150kΩ,2
	R55	QRG02DJ-222X	OMF RESISTOR	2.2kΩ,2
⚠	R56	QRZ0077-470X	FUSIBLE RESISTOR	47Ω,1/4
	R57	QRG01DJ-150X	MF RESISTOR	15Ω,1
	R59	QRV144F-2211AY	CMF RESISTOR	2.21kΩ,1/4
	R60	QRV144F-3481AY	CMF RESISTOR	3.48kΩ,1/4
	R61	QRD161J-122	RESISTOR	1.2kΩ,1/6
	R62	QRD161J-471	RESISTOR	470Ω,1/6
	R64	QRL02DJ-182X	OMF RESISTOR	1.8kΩ,2
⚠	C1	QFZ9022-683	F CAPACITOR	0.068μ
⚠	C3	QFZ9022-223	F CAPACITOR	0.022μ
⚠	C4	QCZ9071-222	CAPACITOR	0.0022μ
	C5	QETC1HM-225	E CAPACITOR	2.2μF,50
	C6	QFLA1HJ-183Z	F CAPACITOR	0.018μF,50
	C7	QCZ0212-472	CAPACITOR	0.0047μF,1k
	C8	QCBB1HJ-271	CAPACITOR	270pF,50
	C9	QFV11HJ-104	F CAPACITOR	0.1μF,50
	C10	PECA0738-107	E CAPACITOR	100μ
	C11	QCZ0302-330Z	CAPACITOR	33p
	C51	QEMR1AM-107	E CAPACITOR	100μF,10
	C53	QEMW1AM-228	E CAPACITOR	2200μF,10
	C54	QEMT1CM-128	E CAPACITOR	1200μF,16
	C55	QEMU1EM-187	E CAPACITOR	180μF,25
	C59	QETC1JM-226	E CAPACITOR	22μF,63
	C60	QETC1HM-226	E CAPACITOR	22μF,50
	C61	QFLA1HJ-103Z	F CAPACITOR	0.01μF,50
	C64	QETC1CM-227	E CAPACITOR	220μF,16
	C65	QETC1AM-337	E CAPACITOR	330μF,10
	C67	QETC1HM-474	E CAPACITOR	0.47μF,50
⚠	LF1	PELN0885	LINE FILTER	
⚠	LF2	QQR0001-001	LINE FILTER	
	L51	PELN0270-330KZ	COIL	33μ
	L52	PELN0270-330KZ	COIL	33μ
	L53	PELN0966-330L	COIL	33μ
	K1	PELN0662-Z	FERRATE BEADS	
⚠	PC1	PC123FY2	PH COUPLER	
⚠	T1	PELN1173	SW TRANS	
	FC1	PEMC0965-Z	FUSE CLIP	
	FC2	PEMC0965-Z	FUSE CLIP	
⚠	HS1	PQ46583	HEAT SINK	
	EH1	PQ44695-1-1	EARTH PLATE,X2	
	SD1	PQ21948	SHIELD CASE	
	OT1	SDST3006Z	SCREW,X7	
⚠	CN1	PU60250-2	CONNECTOR,(1-2)AC IN	
	CN2	PEMC1101-118	FFC CONNECTOR,(1-18)MAIN	
⚠	F1	QMF51E2-1R25J1	FUSE	T1.2

****

MAIN BOARD ASSEMBLY <03>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
PW1	PB11053A-02	MAIN BOARD ASSY
IC1	LC74795-9601	IC
IC3	TC74HC4052AF-XE	IC(DIGITAL)
IC4	MM1031XM	IC
IC301	XLA7795LS	IC
	or BA7795LS	IC
IC401	AN3664NFB-A	IC
IC601	BA3129F	IC
IC602	MC14053BF	IC
IC621	BA15218F-XE	IC
IC651	AN7395S	IC
IC701	HD6433929TA79F	QFP IC (MCU)
IC702	24LC08B/P	IC
	or X24C08-10P	IC
	or AT24C08-10PC	IC
IC703	S-80728AN-Z	IC
	or RE5VA28A	IC
	or RE5VL28A	IC
IC704	TA7291S	IC
IC705	BU2090	IC
	or M50253P	IC
IC801	M38024M6-305FP	QFP IC (MCU)
IC802	TA7291S	IC
IC803	BA10358F	IC
IC1001	BA15218F-XE	IC
	or M5223FP	IC
IC1101	BU2885CS	IC
Q1	2SA1577(QR)	TRANSISTOR
Q2	2SC4097(QR)	TRANSISTOR
Q3	DTA144TU	TRANSISTOR
Q5	DTA144WU	TRANSISTOR
	or UN511E	TRANSISTOR
	or RN2309	TRANSISTOR
Q6	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q7	2SC4081(QRS)	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q8	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q9	2SC4081(QRS)	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q10	2SA1576(QR)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SB1218A(QR)	TRANSISTOR
Q11	DTC144WU	TRANSISTOR
	or UN521E	TRANSISTOR
	or RN1309	TRANSISTOR
Q12	2SA1576(QR)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SB1218A(QR)	TRANSISTOR
Q13	2SA1576(QR)	TRANSISTOR
	or 2SB1218A(QR)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q14	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q15	2SA1576(QR)	TRANSISTOR
	or 2SB1218A(QR)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q16	2SA1576(QR)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SB1218A(QR)	TRANSISTOR
Q17	2SC4081(QRS)	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q18	IMX3	TRANSISTOR
Q19	IMX3	TRANSISTOR
Q20	FMW1	TRANSISTOR
Q21	2SC4081(QRS)	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q22	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q23	2SC4081(QRS)	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q24	2SA1576(QR)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SB1218A(QR)	TRANSISTOR
Q301	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q302	2SA1576(QR)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SB1218A(QR)	TRANSISTOR
Q303	2SA1576(QR)	TRANSISTOR
	or 2SB1218A(QR)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q304	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q305	DTC114EU	TRANSISTOR
	or RN1302	TRANSISTOR
	or UN5211	TRANSISTOR
Q306	DTC114EU	TRANSISTOR
	or RN1302	TRANSISTOR
	or UN5211	TRANSISTOR
Q311	DTA114EU	TRANSISTOR
	or RN2302	TRANSISTOR
	or UN5111	TRANSISTOR
Q312	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q621	DTA144WU	TRANSISTOR
	or RN2309	TRANSISTOR
	or UN511E	TRANSISTOR
Q622	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q623	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q651	2SC3311A(RS)	TRANSISTOR

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
Q701	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q702	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q703	DTC114EU	TRANSISTOR
	or RN1302	TRANSISTOR
	or UN5211	TRANSISTOR
Q704	LP40038-001A	TAPE SENSOR
Q705	LP40038-001A	TAPE SENSOR
Q706	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q707	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q708	2SB1256	TRANSISTOR
Q709	DTC114TU	TRANSISTOR
Q710	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q711	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q801	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q802	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q901	2SD2159(UV)	TRANSISTOR
Q902	DTA144WU	TRANSISTOR
	or RN2309	TRANSISTOR
	or UN511E	TRANSISTOR
Q903	2SD2528(QP)	TRANSISTOR
Q904	2SD1450S,T	TRANSISTOR
	or 2SD1302(ST)	TRANSISTOR
Q905	2SD2528(QP)	TRANSISTOR
Q906	2SC4081(QRS)	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A(QRS)	TRANSISTOR
Q1002	2SB810H,J	TRANSISTOR
Q1003	2SC3068	TRANSISTOR
Q1008	2SB1218A(RS)	TRANSISTOR
	or 2SA1576(RS)	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q1009	UN511E	TRANSISTOR
	or RN2309	TRANSISTOR
	or DTA144WU	TRANSISTOR
Q1101	DTC114EU	TRANSISTOR
	or RN1302	TRANSISTOR
	or UN5211	TRANSISTOR
D3	DAP202U	DIODE
D4	DAP202U	DIODE
D5	1SS133	DIODE
	or 1N4148M	DIODE
D6	1SS133	DIODE
	or 1N4148M	DIODE
D7	DAN202U	DIODE
D301	1N4148M	DIODE

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
	or 1SS133	DIODE	
D302	DAP202U	DIODE	
D303	1N4148M	DIODE	
	or 1SS133	DIODE	
D402	11ES2	DIODE	
D651	MTZ10B	ZENER DIODE	
	or RD10ES-T1B2	ZENER DIODE	
D701	RD9.1ES-T1B2	ZENER DIODE	
	or MTZJ9.1(B)	ZENER DIODE	
D702	11ES2	DIODE	
D703	1N4148M	DIODE	
	or 1SS133	DIODE	
	or MA165	DIODE	
D704	11ES2	DIODE	
D705	1N4148M	DIODE	
	or 1SS133	DIODE	
	or MA165	DIODE	
D706	1N4148M	DIODE	
	or MA165	DIODE	
	or 1SS133	DIODE	
D707	11ES2	DIODE	
D710	SIR-381SB3FM	LE DIODE	
	or SIR-381SB3FX1M	LE DIODE	
D711	1N4148M	DIODE	
	or MA165	DIODE	
	or 1SS133	DIODE	
D712	1N4148M	DIODE	
	or 1SS133	DIODE	
	or MA165	DIODE	
D714	1N4148M	DIODE	
	or MA165	DIODE	
	or 1SS133	DIODE	
D715	1N4148M	DIODE	
	or 1SS133	DIODE	
	or MA165	DIODE	
D901	RD5.1JSB2	DIODE	
	or MA4051N(L)	ZENER DIODE	
D902	1N4148M	DIODE	
	or 1SS133	DIODE	
D1001	MTZ10B	ZENER DIODE	
D1002	MTZJ33(C)	ZENER DIODE	
	or UZ33BSC	DIODE	
R1	QRSA08J-393YN	RESISTOR	39kΩ,1/10
R5	QRSA08J-512YN	RESISTOR	5.1kΩ,1/10
R6	QRSA08J-223YN	RESISTOR	22kΩ,1/10
R7	QRE121J-331Y	RESISTOR	330Ω,1/2
R8	QRSA08J-752YN	RESISTOR	7.5kΩ,1/10
R9	QRSA08J-103YN	RESISTOR	10kΩ,1/10
R10	QRSA08J-622YN	RESISTOR	6.2kΩ,1/10
R11	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10
R12	QRSA08J-103YN	RESISTOR	10kΩ,1/10
R15	QRSA08J-103YN	RESISTOR	10kΩ,1/10
R16	QRSA08J-103YN	RESISTOR	10kΩ,1/10
R17	QRSA08J-103YN	RESISTOR	10kΩ,1/10
R18	QRSA08J-103YN	RESISTOR	10kΩ,1/10
R19	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10
R20	QRSA08J-471YN	RESISTOR	470Ω,1/10
R21	QRSA08J-103YN	RESISTOR	10kΩ,1/10
R22	QRSA08J-471YN	RESISTOR	470Ω,1/10
R23	QRSA08J-102YN	RESISTOR	1kΩ,1/10
R24	QRSA08J-0R0Y	RESISTOR	0Ω,1/10

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R25	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R26	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R27	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R28	QRSA08J-180YN	RESISTOR	18Ω,1/10W
R29	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R30	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R31	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R32	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R33	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R34	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R35	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R36	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R37	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R38	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R39	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R40	QRSA08J-910YN	RESISTOR	91Ω,1/10W
R41	QRSA08J-911YN	RESISTOR	910Ω,1/10W
R42	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R43	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R44	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R45	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R46	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R47	NRVA02D-562X	CMF RESISTOR	5.6kΩ,1/10W
R48	NRVA02D-562X	CMF RESISTOR	5.6kΩ,1/10W
R49	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R50	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R51	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R52	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R53	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R54	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R55	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R56	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R57	QRSA08J-162YN	RESISTOR	1.6kΩ,1/10W
R58	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R59	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R60	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R61	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R62	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R64	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R65	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R67	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R301	QRD161J-221	RESISTOR	220Ω,1/6W
R302	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R303	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R304	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R305	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R306	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R307	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R308	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R309	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R310	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R311	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R312	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R313	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R314	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
R315	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R316	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R317	QRSA08J-475YN	RESISTOR	4.7MΩ,1/10W
R318	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R319	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R320	QRSA08J-153YN	RESISTOR	15kΩ,1/10W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R321	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R322	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R323	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R324	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R325	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R326	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R327	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R328	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R329	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R330	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R331	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R332	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R333	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R334	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R335	QRSA08J-3R3YN	RESISTOR	3.3Ω,1/10W
R336	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R338	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R342	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R343	QRSA08J-151YN	RESISTOR	150Ω,1/10W
R344	QRSA08J-3R3YN	RESISTOR	3.3Ω,1/10W
R345	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R401	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R402	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R404	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R405	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R406	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R407	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R409	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R410	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R411	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R412	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R413	QRSA08J-511YN	RESISTOR	510Ω,1/10W
R416	QRSA08J-511YN	RESISTOR	510Ω,1/10W
R417	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R418	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R419	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R420	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R422	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R423	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R424	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R425	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R428	QRD161J-221	RESISTOR	220Ω,1/6W
R431	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R432	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R436	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R437	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R438	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R440	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R442	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R443	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R444	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R445	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R446	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R447	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R448	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R449	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R450	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R601	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R602	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R603	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R604	QRSA08J-103YN	RESISTOR	10kΩ,1/10W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R605	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R606	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R607	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R608	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R609	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R610	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R611	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R612	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R621	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R622	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R623	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R624	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R625	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R626	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R627	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R628	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R651	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R653	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R655	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R657	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R658	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R659	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R660	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R662	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R663	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R664	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R701	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R702	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R703	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R704	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R705	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R706	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R707	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R708	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R709	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R710	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R711	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R712	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R713	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R714	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R715	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R716	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R717	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R718	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R719	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R720	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R721	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R722	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R723	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R724	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R725	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R726	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R727	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R728	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R729	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R730	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R731	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R732	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R733	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R734	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R735	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R736	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R738	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R739	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R740	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R741	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R742	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R743	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R744	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R745	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R746	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R747	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R748	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R749	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R750	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R751	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R752	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R753	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R754	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R755	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R756	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R757	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R758	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R760	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R761	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R762	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R763	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R764	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R765	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R766	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R767	QRSA08J-334YN	RESISTOR	330kΩ,1/10W
R769	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R770	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R771	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R772	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R773	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R774	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R775	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R776	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R777	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R778	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R779	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R780	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R781	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R782	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R783	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R784	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R785	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R786	QRD161J-750	RESISTOR	75Ω,1/6W
R787	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R788	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R789	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R790	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R791	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R792	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R793	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R794	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R796	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R797	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R798	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R799	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R800	QRSA08J-471YN	RESISTOR	470Ω,1/10W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R801	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R802	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R803	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R805	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R806	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R807	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R809	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R810	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R814	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R815	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R816	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R817	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R818	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R821	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R834	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R835	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R841	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R842	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R843	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R844	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R845	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R846	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R847	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R848	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R849	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R850	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R851	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R852	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R853	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R854	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R855	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R856	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R857	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R858	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R859	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R860	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R861	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R862	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R863	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R864	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R865	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R866	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R867	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R868	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R869	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R870	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R871	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R873	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R874	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R875	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R876	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R877	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R878	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R879	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R880	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R881	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R882	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R883	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R884	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R885	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R886	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R887	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R888	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R889	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R890	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R891	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R892	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R893	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R894	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R895	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R896	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R897	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R898	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R899	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R900	QRD161J-103	RESISTOR	10kΩ,1/6W
R901	QRD161J-511	RESISTOR	510Ω,1/6W
R902	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R903	QRD161J-102	RESISTOR	1kΩ,1/6W
R904	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R905	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R906	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R907	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R908	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R909	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R910	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
VR401	QVPA606-223Z	V RESISTOR,EE LEVEL ADJ.	
VR901	QVPA606-471Z	V RESISTOR,SW5V ADJ.	
R1001	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R1002	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R1003	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R1004	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R1012	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R1016	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R1026	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R1030	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R1048	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R1049	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R1102	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R1103	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R1105	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R1106	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R1107	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R1108	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R1109	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R1112	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R1113	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R1114	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
C4	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
C5	NCB21CK-224X	CAPACITOR	0.22μF,16V
C6	QCYA1HK-103	CAPACITOR	0.01μF,50V
C7	QETC1CM-476	E CAPACITOR	47μF,16V
C8	QCYA1HK-103	CAPACITOR	0.01μF,50V
C9	QCYA1HK-103	CAPACITOR	0.01μF,50V
C10	QETC1AM-107	E CAPACITOR	100μF,10V
C11	QCYA1HK-103	CAPACITOR	0.01μF,50V
C12	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
C13	QETC1HM-105	E CAPACITOR	1μF,50V
C14	QETC1HM-105	E CAPACITOR	1μF,50V
C15	QCYA1HK-103	CAPACITOR	0.01μF,50V
C20	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
C21	QCYA1HK-103	CAPACITOR	0.01μF,50V
C23	NDC21HJ-560X	CAPACITOR	56pF,50V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C27	NCB21EK-104X	CAPACITOR	0.1µF,25V
C28	NDC21HJ-470X	CAPACITOR	47pF,50V
C29	NDC21HJ-470X	CAPACITOR	47pF,50V
C30	QCYA1HK-103	CAPACITOR	0.01µF,50V
C31	QCYA1HK-103	CAPACITOR	0.01µF,50V
C32	NCB21CK-224X	CAPACITOR	0.22µF,16V
C33	NCB21CK-224X	CAPACITOR	0.22µF,16V
C34	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
C35	QCYA1HK-103	CAPACITOR	0.01µF,50V
C36	QETC1HM-106	E CAPACITOR	10µF,50V
C37	QETC1HM-106	E CAPACITOR	10µF,50V
C39	NDC21HJ-102X	CAPACITOR	0.001µF,50V
C40	QCYA1HK-103	CAPACITOR	0.01µF,50V
C41	QCYA1HK-103	CAPACITOR	0.01µF,50V
C42	QCYA1HK-103	CAPACITOR	0.01µF,50V
C43	QCYA1HK-103	CAPACITOR	0.01µF,50V
C44	NDC21HJ-331X	CAPACITOR	330pF,50V
C45	QCYA1HK-103	CAPACITOR	0.01µF,50V
C46	QETC1CM-476	E CAPACITOR	47µF,16V
C47	QCTA1CH-360	CAPACITOR	36pF,16V
C48	NDC21HJ-330X	CAPACITOR	33pF,50V
C49	NDC21HJ-330X	CAPACITOR	33pF,50V
C50	NDC21HJ-470X	CAPACITOR	47pF,50V
C51	NDC21HJ-330X	CAPACITOR	33pF,50V
C54	QDYB1CM-103	CAPACITOR	0.01µF,16V
C301	QCYA1HK-222	CAPACITOR	0.0022µF,50V
C302	QEKJ1CM-476	E CAPACITOR	47µF,16V
C303	QEKJ1CM-106	E CAPACITOR	10µF,16V
C304	QETC1HM-105	E CAPACITOR	1µF,50V
C305	QFN31HJ-682	F CAPACITOR	0.0068µF,50V
C306	QFN31HJ-153	F CAPACITOR	0.015µF,50V
C307	QFN31HJ-153	F CAPACITOR	0.015µF,50V
C308	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
C309	QCTA1CH-681	CAPACITOR	680pF,16V
C311	NCB21HK-123X	CAPACITOR	0.012µF,50V
C312	QEKJ1CM-226	E CAPACITOR	22µF,16V
C313	NCB21EK-223X	CAPACITOR	0.022µF,25V
C315	QEKJ1CM-226	E CAPACITOR	22µF,16V
C316	NCB21EK-333X	CAPACITOR	0.033µF,25V
C318	QEKJ1CM-106	E CAPACITOR	10µF,16V
C319	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
C320	QEKJ1CM-106	E CAPACITOR	10µF,16V
C321	QCYA1HK-103	CAPACITOR	0.01µF,50V
C331	QCYA1HK-103	CAPACITOR	0.01µF,50V
C332	QCYA1HK-332	CAPACITOR	0.0033µF,50V
C333	QEKJ1CM-226	E CAPACITOR	22µF,16V
C334	NDC21HJ-331X	CAPACITOR	330pF,50V
C335	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
C341	QCYA1HK-103	CAPACITOR	0.01µF,50V
C342	QCYA1HK-332	CAPACITOR	0.0033µF,50V
C343	QEKJ1CM-106	E CAPACITOR	10µF,16V
C344	QFN31HJ-333	F CAPACITOR	0.033µF,50V
C402	QEKJ1CM-476	E CAPACITOR	47µF,16V
C403	QEKJ1CM-106	E CAPACITOR	10µF,16V
C404	QEKJ1CM-106	E CAPACITOR	10µF,16V
C405	QEKJ1CM-106	E CAPACITOR	10µF,16V
C406	QEKJ1CM-106	E CAPACITOR	10µF,16V
C407	NCB21EK-473X	CAPACITOR	0.047µF,25V
C408	QEKJ1CM-476	E CAPACITOR	47µF,16V
C409	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
C410	QEKJ1CM-476	E CAPACITOR	47µF,16V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C411	QCYA1HK-153	CAPACITOR	0.015µF,50V
C412	QCYA1HK-103	CAPACITOR	0.01µF,50V
C413	QCYA1HK-103	CAPACITOR	0.01µF,50V
C414	QCYA1HK-103	CAPACITOR	0.01µF,50V
C415	QETC1HM-224	E CAPACITOR	0.22µF,50V
C416	QCYA1HK-103	CAPACITOR	0.01µF,50V
C417	QCYA1HK-153	CAPACITOR	0.015µF,50V
C418	QEKJ1CM-476	E CAPACITOR	47µF,16V
C419	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
C420	NCB21EK-473X	CAPACITOR	0.047µF,25V
C421	QEKJ1CM-476	E CAPACITOR	47µF,16V
C422	QEKJ1CM-106	E CAPACITOR	10µF,16V
C423	QEKJ1CM-106	E CAPACITOR	10µF,16V
C424	QEKJ1CM-106	E CAPACITOR	10µF,16V
C425	QEKJ1CM-106	E CAPACITOR	10µF,16V
C426	QEKJ1HM-105	E CAPACITOR	1µF,50V
C427	QEKJ1CM-476	E CAPACITOR	47µF,16V
C428	QEKJ1CM-226	E CAPACITOR	22µF,16V
C429	QEKJ1HM-105	E CAPACITOR	1µF,50V
C430	QEKJ1CM-476	E CAPACITOR	47µF,16V
C431	QEKJ1CM-476	E CAPACITOR	47µF,16V
C432	QEKJ1CM-226	E CAPACITOR	22µF,16V
C433	QEKJ1CM-226	E CAPACITOR	22µF,16V
C435	QCYA1HK-103	CAPACITOR	0.01µF,50V
C437	QCYA1HK-103	CAPACITOR	0.01µF,50V
C449	NDC21HJ-101X	CAPACITOR	100pF,50V
C450	NDC21HJ-221X	CAPACITOR	220pF,50V
C451	NDC21HJ-470X	CAPACITOR	47pF,50V
C452	NDC21HJ-220X	CAPACITOR	22pF,50V
C601	QEKJ1CM-476	E CAPACITOR	47µF,16V
C602	QEKJ1CM-476	E CAPACITOR	47µF,16V
C603	QEKJ1CM-106	E CAPACITOR	10µF,16V
C604	QETC1HM-106	E CAPACITOR	10µF,50V
C621	QEKJ1CM-106	E CAPACITOR	10µF,16V
C622	QEKJ1CM-106	E CAPACITOR	10µF,16V
C623	QEKJ1CM-106	E CAPACITOR	10µF,16V
C624	QEKJ1CM-476	E CAPACITOR	47µF,16V
C625	QEKJ1CM-476	E CAPACITOR	47µF,16V
C626	QEKJ1CM-476	E CAPACITOR	47µF,16V
C651	QEKJ1CM-226	E CAPACITOR	22µF,16V
C652	QEKJ1CM-476	E CAPACITOR	47µF,16V
C653	QEKJ1CM-476	E CAPACITOR	47µF,16V
C654	QCYA1HK-563	CAPACITOR	0.056µF,50V
C655	QCYA1HK-393	CAPACITOR	0.039µF,50V
C656	QEKJ1CM-106	E CAPACITOR	10µF,16V
C657	QEKJ1CM-106	E CAPACITOR	10µF,16V
C658	QEKJ1CM-476	E CAPACITOR	47µF,16V
C661	QCYA1HK-273	CAPACITOR	0.027µF,50V
C662	QCYA1HK-103	CAPACITOR	0.01µF,50V
C663	QEKJ1CM-476	E CAPACITOR	47µF,16V
C664	QEKJ1CM-476	E CAPACITOR	47µF,16V
C665	QEKJ1CM-106	E CAPACITOR	10µF,16V
C666	QEKJ1CM-106	E CAPACITOR	10µF,16V
C681	QCYA1HK-561	CAPACITOR	560pF,50V
C682	QCYA1HK-561	CAPACITOR	560pF,50V
C683	QCYA1HK-561	CAPACITOR	560pF,50V
C684	QCYA1HK-561	CAPACITOR	560pF,50V
C685	QCYA1HK-561	CAPACITOR	560pF,50V
C686	QCYA1HK-561	CAPACITOR	560pF,50V
C687	QCYA1HK-561	CAPACITOR	560pF,50V
C688	QCYA1HK-561	CAPACITOR	560pF,50V

⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C701	QAT3120-450Z	TRIM CAPACITOR,TIMER CLOCK	
	C702	NDC21HJ-180X	CAPACITOR	18pF,50V
	C703	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C704	QEKJ1CM-106	E CAPACITOR	10µF,16V
	C709	NCB21EK-104X	CAPACITOR	0.1µF,25V
	C712	NCB21HK-102X	CAPACITOR	0.001µF,50V
	C715	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C717	QEKJ1CM-336	E CAPACITOR	33µF,16V
	C719	QEZ0244-229	EDL CAPACITOR	0.0022F
	C730	QEKJ1CM-106	E CAPACITOR	10µF,16V
	C731	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C736	QCFA1EZ-104	CAPACITOR	0.1µF,25V
	C740	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C750	NDC21HJ-470X	CAPACITOR	47pF,50V
	C801	QCFA1EZ-104	CAPACITOR	0.1µF,25V
	C802	QEKJ1HM-335	E CAPACITOR	3.3µF,50V
	C803	PECA0741-335MZ	E CAPACITOR(OS)	3.3µF,20V
	C805	NCB21EK-104X	CAPACITOR	0.1µF,25V
	C901	QETC1CM-226	E CAPACITOR	22µF,16V
	C902	QEKJ1AM-107	E CAPACITOR	100µF,10V
	C903	QEKJ1CM-106	E CAPACITOR	10µF,16V
	C904	QEKJ1CM-107	E CAPACITOR	100µF,16V
	C905	QETC1CM-476	E CAPACITOR	47µF,16V
	C906	QETC1CM-107	E CAPACITOR	100µF,16V
	C908	QEKJ1AM-107	E CAPACITOR	100µF,10V
	C909	QCYA1HJ-102	CAPACITOR	0.001µF,50V
	C910	QETC1CM-226	E CAPACITOR	22µF,16V
	C1001	QETC1CM-336	E CAPACITOR	33µF,16V
	C1002	NCB21HK-102X	CAPACITOR	0.001µF,50V
	C1003	QETC1HM-106	E CAPACITOR	10µF,50V
	C1004	NCB21HK-102X	CAPACITOR	0.001µF,50V
	C1008	NCB21HK-102X	CAPACITOR	0.001µF,50V
	C1101	NCB21HK-102X	CAPACITOR	0.001µF,50V
	C1103	NCB21EK-563X	CAPACITOR	0.056µF,25V
	C1104	NDC21HJ-101X	CAPACITOR	100pF,50V
	C1105	NCB21EK-223X	CAPACITOR	0.022µF,25V
	C1106	NCB21EK-104X	CAPACITOR	0.1µF,25V
	C1107	NCB21HK-102X	CAPACITOR	0.001µF,50V
	C1110	QCYA1HK-222	CAPACITOR	0.0022µF,50V
	C1111	NCB21EK-104X	CAPACITOR	0.1µF,25V
	C1113	QEKJ1CM-106	E CAPACITOR	10µF,16V
	C1114	QEKJ1CM-106	E CAPACITOR	10µF,16V
	C1115	QEKJ0JM-107	E CAPACITOR	100µF,6.3V
	C1116	QEKJ1HM-105	E CAPACITOR	1µF,50V
	L1	QQL29BK-1R0Z	COIL	1µH
	L2	PELN0975-101JZ	COIL	100µH
	L3	PU59988-220JY	COIL	22µH
	L4	PELN0975-101JZ	COIL	100µH
	L6	PELN0975-101JZ	COIL	100µH
	L7	PU59988-1R0JY	COIL	1µH
	L8	PU59988-1R0JY	COIL	1µH
	L9	PELN0975-101JZ	COIL	100µH
	L10	PELN0975-100JZ	COIL	10µH
	L11	PU59988-270J	COIL	27µH
	L12	PELN0841-1R0KY	COIL	1µH
	L13	PELN0841-1R0KY	COIL	1µH
	L301	PU58308-123J	COIL	12mH
	L402	PELN0975-331JZ	COIL	330µH
	L403	PELN0975-101JZ	COIL	100µH
	L703	QQL29BJ-100Z	COIL	10µH
	L901	PU48530-101J	COIL	100µH

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	L1003	QQL29BK-1R0Z	COIL	1µH
	L1081	PU59152-1R0J	COIL	1µH
	LC1	PU60714	EQUALIZER	
	CF701	PEVB0594-Z	RESONATOR	
	CF801	PU60440-2	RESONATOR	
	LC681	PU59988-5R6JW	COIL	5.6µH
	LC682	PU59988-5R6JW	COIL	5.6µH
	LC683	PU59988-5R6JW	COIL	5.6µH
	LC684	PU59988-5R6JW	COIL	5.6µH
	X701	PEVB0422	CRYSTAL RESONATOR	
	PS701	SG-246	IC(PHOTO SENSOR	
	PS702	SG-246	IC(PHOTO SENSOR	
	T301	PELN0860	OSC TRANSFORMER	
	T302	PELN0861	OSC TRANSFORMER	
	J401	PU61150-2	PIN JACK(SW),R AUDIO IN	
	J402	PU61149-4	PIN JACK,AUDIO OUT	
	J701	PU60612	MINI JACK,PAUSE/RAE	
	TU1001	QAU0012-001	TUNER	
	UN1001	QAU0028-001	IF UNIT	
	CN1	PEMC1168-016	CONNECTOR,(1-16)PRE/REC	
	CN4	PU59555-4	CONNECTOR,(1-4)EVR	
	CN5	PEMC0969-111	CONNECTOR,(1-11)TERMINAL	
	CN6	PEMC0969-112	CONNECTOR,(1-12)TERMINAL	
	CN301	PU60727-7	CONNECTOR,(1-7)A/C HEAD	
	CN302	PU60727-2	CONNECTOR,(1-2)FE HEAD	
	CN401	PEMC1102-015	FFC CONNECTOR,(1-15)SW/JACK	
	CN402	PEMC0969-111	CONNECTOR,(1-11)TERMINAL	
	CN403	PEMC1168-013	CONNECTOR,(1-13)PRE/REC	
	CN701	PEMC1077	CONNECTOR,(1-8)CAP MDA	
	CN702	PU61434-1-1	CONNECTOR,(1-5)ROTARY ENCODER	
	CN703	PU60727-2	CONNECTOR,(1-2)LOADING MOTOR	
	CN704	PEMC1102-013	FFC CONNECTOR,(1-13)DISPLAY/S	
	CN801	PU60727-6	CONNECTOR,(1-6)DD SENSOR/MOTOR	
	CN802	PEMC1101-005	FFC CONNECTOR,(1-5)JOG/JOG	
	CN901	PEMC1101-018	FFC CONNECTOR,(1-18)SW.REG	
	CN1102	PEMC1102-004	FFC CONNECTOR,(1-4)DRUM MOTOR	
⚠	CP1	ICP-N20	CIRCUIT PROTECTOR	
⚠	CP2	ICP-N15	CIRCUIT PROTECTOR	
⚠	CP701	ICP-N25	CIRCUIT PROTECTOR	
⚠	CP702	ICP-N25	CIRCUIT PROTECTOR	
⚠	CP801	ICP-N20	CIRCUIT PROTECTOR	
⚠	CP901	ICP-N15	CIRCUIT PROTECTOR	
⚠	CP903	ICP-N15	CIRCUIT PROTECTOR	
⚠	CP1101	ICP-N15	CIRCUIT PROTECTOR	

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VIDEO UNIT BOARD ASSEMBLY <05>

	PW1	PB11058A-01	VIDEO UNIT BOARD ASSY
	IC3001	JCP0054	IC
	IC3002	HA118092FP-XE	IC
	IC3003	VC2076MP-XE	IC

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
IC3004	M62353GP	IC
IC3005	93LC46/P	IC
IC3006	NJM431U-XE	IC
IC3007	TC74HC04AF	IC
IC3301	JCP0042	IC
IC3302	JCP0064	IC(DIGITAL)
IC3303	NJM2240M	IC
IC3304	TC7SU04F	IC(DIGITAL)
Q3001	2SC4081(QRS)	TRANSISTOR
Q3002	2SA1576(QRS)	TRANSISTOR
Q3003	2SC4081(QRS)	TRANSISTOR
Q3006	2SC4081(QRS)	TRANSISTOR
Q3007	2SA1576(QRS)	TRANSISTOR
Q3008	DTC144WU	TRANSISTOR
Q3009	DTC144WU	TRANSISTOR
Q3010	DTC114EU	TRANSISTOR
Q3011	DTC114EU	TRANSISTOR
Q3012	DTC114EU	TRANSISTOR
Q3013	2SA1576(QRS)	TRANSISTOR
Q3014	DTC144WU	TRANSISTOR
Q3015	DTC144WU	TRANSISTOR
Q3016	DTC144WU	TRANSISTOR
Q3017	2SC4081(QRS)	TRANSISTOR
Q3018	DTA144WU	TRANSISTOR
Q3019	2SC4081(QRS)	TRANSISTOR
Q3020	DTC144WU	TRANSISTOR
Q3201	2SC4081(QRS)	TRANSISTOR
Q3202	2SC4081(QRS)	TRANSISTOR
Q3203	2SC4081(QRS)	TRANSISTOR
Q3204	DTC144WU	TRANSISTOR
Q3205	DTC144WU	TRANSISTOR
Q3206	DTC144WU	TRANSISTOR
Q3207	2SC4081(QRS)	TRANSISTOR
Q3208	2SA1576(QRS)	TRANSISTOR
Q3209	2SA1576(QRS)	TRANSISTOR
Q3210	2SC4081(QRS)	TRANSISTOR
Q3211	DTC144WU	TRANSISTOR
Q3212	2SC4081(QRS)	TRANSISTOR
Q3213	2SC4081(QRS)	TRANSISTOR
Q3214	2SC4081(QRS)	TRANSISTOR
Q3215	2SA1576(QRS)	TRANSISTOR
Q3216	2SA1576(QRS)	TRANSISTOR
Q3301	2SC4081(QRS)	TRANSISTOR
Q3302	2SC4081(QRS)	TRANSISTOR
Q3303	2SC4081(QRS)	TRANSISTOR
Q3304	2SA1576(QRS)	TRANSISTOR
Q3305	2SC4081(QRS)	TRANSISTOR
Q3306	2SA1576(QRS)	TRANSISTOR
Q3307	2SA1576(QRS)	TRANSISTOR
Q3308	2SC4081(QRS)	TRANSISTOR
Q3309	2SA1576(QRS)	TRANSISTOR
Q3310	2SC4081(QRS)	TRANSISTOR
Q3311	2SC4081(QRS)	TRANSISTOR
Q3312	2SC4081(QRS)	TRANSISTOR
Q3313	2SC4081(QRS)	TRANSISTOR
Q3314	2SC4081(QRS)	TRANSISTOR
Q3315	2SC4081(QRS)	TRANSISTOR
Q3316	2SC4081(QRS)	TRANSISTOR
Q3317	2SA1576(QRS)	TRANSISTOR
Q3318	2SA1576(QRS)	TRANSISTOR
Q3319	2SC4081(QRS)	TRANSISTOR

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
Q3320	2SC4081(QRS)	TRANSISTOR	
Q3321	2SC4081(QRS)	TRANSISTOR	
D3001	1SS355	DIODE	
D3002	DAP202U	DIODE	
D3003	1SS356	DIODE	
D3004	DAN202U	DIODE	
R3001	NRVA63D-391X	CMF RESISTOR	390Ω,1/16
R3002	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3003	NRVA63D-391X	CMF RESISTOR	390Ω,1/16
R3004	NRVA63D-682X	CMF RESISTOR	6.8kΩ,1/16
R3005	NRVA63D-272X	CMF RESISTOR	2.7kΩ,1/16
R3006	NRVA63D-332X	CMF RESISTOR	3.3kΩ,1/16
R3007	NRVA63D-332X	CMF RESISTOR	3.3kΩ,1/16
R3008	NRVA63D-152X	CMF RESISTOR	1.5kΩ,1/16
R3009	NRSA63J-103X	MG RESISTOR	10kΩ,1/16
R3010	NRSA63J-823N	RESISTOR	82kΩ,1/16
R3011	NRSA63J-101X	MG RESISTOR	100Ω,1/16
R3012	NRSA63J-162X	MG RESISTOR	1.6kΩ,1/16
R3013	NRVA63D-471X	CMF RESISTOR	470Ω,1/16
R3014	NRVA63D-102X	CMF RESISTOR	1kΩ,1/16
R3015	NRVA63D-102X	CMF RESISTOR	1kΩ,1/16
R3016	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16
R3017	NRSA63J-273X	MG RESISTOR	27kΩ,1/16
R3018	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3019	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3020	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3021	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3022	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16
R3023	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3024	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16
R3025	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3026	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16
R3027	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16
R3028	NRSA63J-391X	MG RESISTOR	390Ω,1/16
R3029	NRSA63J-151X	MG RESISTOR	150Ω,1/16
R3030	NRSA63J-122X	MG RESISTOR	1.2kΩ,1/16
R3031	NRSA63J-162X	MG RESISTOR	1.6kΩ,1/16
R3032	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16
R3034	NRSA63J-181N	RESISTOR	180Ω,1/16
R3035	NRSA63J-123N	RESISTOR	12kΩ,1/16
R3037	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16
R3038	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16
R3039	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16
R3040	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3041	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16
R3042	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16
R3043	NRVA63D-561X	CMF RESISTOR	560Ω,1/16
R3045	NRSA63J-102X	MG RESISTOR	1kΩ,1/16
R3046	NRSA63J-223X	MG RESISTOR	22kΩ,1/16
R3047	NRSA63J-363N	RESISTOR	36kΩ,1/16
R3048	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16
R3049	NRVA63D-682X	CMF RESISTOR	6.8kΩ,1/16
R3050	NRSA63J-683N	RESISTOR	68kΩ,1/16
R3051	NRSA63J-104X	MG RESISTOR	100kΩ,1/16
R3052	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16
R3053	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16
R3054	NRSA63J-684N	RESISTOR	680kΩ,1/16
R3055	NRSA63J-821X	MG RESISTOR	820Ω,1/16
R3056	NRVA63D-243X	CMF RESISTOR	24kΩ,1/16
R3057	NRVA63D-822X	CMF RESISTOR	8.2kΩ,1/16
R3058	NRVA63D-152X	CMF RESISTOR	1.5kΩ,1/16

⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R3059	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R3060	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3061	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R3062	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R3063	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R3064	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R3065	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3066	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R3067	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
R3068	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3069	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3070	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
R3071	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R3072	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
R3073	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R3074	NRSA63J-475X	MG RESISTOR	4.7MΩ,1/16W
R3075	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W
R3076	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3077	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3078	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3079	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3080	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3081	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3082	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R3083	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R3084	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3086	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3087	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3201	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R3202	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3203	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R3204	NRSA63J-183X	MG RESISTOR	18kΩ,1/16W
R3205	NRSA63J-392X	MG RESISTOR	3.9kΩ,1/16W
R3206	NRSA63J-183X	MG RESISTOR	18kΩ,1/16W
R3207	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3208	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W
R3209	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3210	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3211	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3212	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3213	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3214	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W
R3215	QVZ3521-102Z	V RESISTOR,S-SP FRQ	
R3216	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R3217	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3218	QVZ3521-222Z	V RESISTOR,S-EP FRQ	
R3219	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
R3220	NRSA63J-122X	MG RESISTOR	1.2kΩ,1/16W
R3221	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3222	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3223	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R3224	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R3225	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R3226	NRSA63J-392X	MG RESISTOR	3.9kΩ,1/16W
R3227	NRSA63J-273X	MG RESISTOR	27kΩ,1/16W
R3228	NRSA63J-112X	MG RESISTOR	1.1kΩ,1/16W
R3229	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R3230	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3231	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R3232	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
R3233	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R3234	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R3235	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3236	NRSA63J-162X	MG RESISTOR	1.6kΩ,1/16W
R3237	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
R3238	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W
R3239	NRSA63J-392X	MG RESISTOR	3.9kΩ,1/16W
R3240	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
R3301	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3302	NRVA63D-332X	CMF RESISTOR	3.3kΩ,1/16W
R3303	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R3304	NRSA63J-361N	RESISTOR	360Ω,1/16W
R3305	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3306	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3307	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3308	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3309	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3312	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3313	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3314	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3315	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3316	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3317	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R3319	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
R3320	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R3321	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R3322	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R3323	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R3324	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
R3325	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3326	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3327	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R3328	NRSA63J-183X	MG RESISTOR	18kΩ,1/16W
R3330	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3331	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3333	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3334	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3336	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3337	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3338	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3339	NRSA63J-391X	MG RESISTOR	390Ω,1/16W
R3340	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
R3342	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3343	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
R3344	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3345	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R3346	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3347	NRSA63J-391X	MG RESISTOR	390Ω,1/16W
R3348	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
R3349	NRSA63J-183X	MG RESISTOR	18kΩ,1/16W
R3350	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
R3351	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3353	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R3354	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R3355	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R3356	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R3357	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R3358	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R3359	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3360	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3362	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3363	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R3364	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3365	NRSA63J-392X	MG RESISTOR	3.9kΩ,1/16W
R3366	NRSA63J-470N	RESISTOR	47Ω,1/16W
R3367	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3368	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3369	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R3370	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3371	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R3372	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R3373	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R3374	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R3375	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R3376	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
R3377	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
C3001	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3002	QEKJ1CM-476	E CAPACITOR	47μF,16V
C3003	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3004	QEKJ1CM-476	E CAPACITOR	47μF,16V
C3005	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3006	NDC31HG-301X	CAPACITOR	300pF,50V
C3007	NDC31HG-301X	CAPACITOR	300pF,50V
C3008	NDC31HG-221X	CAPACITOR	220pF,50V
C3009	QEKJ1CM-476	E CAPACITOR	47μF,16V
C3010	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3011	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3012	NCB31EK-223X	CAPACITOR	0.022μF,25V
C3013	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3014	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C3015	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C3016	NDC31HG-820X	CAPACITOR	82pF,50V
C3017	NDC31HG-271X	CAPACITOR	270pF,50V
C3018	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3019	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3020	QEKJ1HM-105	E CAPACITOR	1μF,50V
C3021	QEKJ1HM-106	E CAPACITOR	10μF,50V
C3022	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3023	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3024	NDC31HJ-120X	CAPACITOR	12pF,50V
C3025	NCT06CH-270A	CAPACITOR	27pF,50V
C3026	NDC31HJ-470X	CAPACITOR	47pF,50V
C3027	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
C3028	NDC31HG-301X	CAPACITOR	300pF,50V
C3029	NDC31HG-301X	CAPACITOR	300pF,50V
C3030	NDC31HJ-101X	CAPACITOR	100pF,50V
C3031	NDC31HJ-181X	CAPACITOR	180pF,50V
C3032	NDC31HG-331X	CAPACITOR	330pF,50V
C3033	NCT06CH-331A	CAPACITOR	330pF,50V
C3034	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3035	QEKJ1CM-476	E CAPACITOR	47μF,16V
C3036	NDC31HJ-120X	CAPACITOR	12pF,50V
C3037	NCT08CH-121A	CAPACITOR	120pF,50V
C3038	NCT06CH-270A	CAPACITOR	27pF,50V
C3040	NDC31HJ-470X	CAPACITOR	47pF,50V
C3041	NDC31HJ-100X	CAPACITOR	10pF,50V
C3042	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3043	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3044	QEKJ1HM-334	E CAPACITOR	0.33μF,50V
C3045	QEKJ1HM-474	E CAPACITOR	0.47μF,50V
C3046	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3047	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3048	QEKJ1HM-104	E CAPACITOR	0.1μF,50V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C3049	NDC31HJ-150X	CAPACITOR	15pF,5
C3050	NCT06CH-121A	CAPACITOR	120pF,5
C3051	NDC31HJ-330X	CAPACITOR	33pF,5
C3052	QEKJ1CM-226	E CAPACITOR	22μF,1
C3053	NCB31CK-473X	CAPACITOR	0.047μF,1
C3054	QEKJ1HM-106	E CAPACITOR	10μF,5
C3055	QEKJ1HM-106	E CAPACITOR	10μF,5
C3056	QEKJ1HM-474	E CAPACITOR	0.47μF,5
C3057	NDC31HG-161X	CAPACITOR	160pF,5
C3058	NCB31CK-104X	CAPACITOR	0.1μF,1
C3059	QEKJ1HM-225	E CAPACITOR	2.2μF,5
C3060	QEKJ1CM-226	E CAPACITOR	22μF,1
C3061	NCB31EK-103X	CAPACITOR	0.01μF,2
C3062	NDC31HJ-470X	CAPACITOR	47pF,5
C3063	NCB31EK-103X	CAPACITOR	0.01μF,2
C3064	QEKJ1CM-476	E CAPACITOR	47μF,1
C3065	NCB31EK-103X	CAPACITOR	0.01μF,2
C3066	NCB31EK-103X	CAPACITOR	0.01μF,2
C3067	NCB31EK-103X	CAPACITOR	0.01μF,2
C3068	NDC31HJ-101X	CAPACITOR	100pF,5
C3069	QEKJ1HM-474	E CAPACITOR	0.47μF,5
C3070	NCB31EK-103X	CAPACITOR	0.01μF,2
C3071	QEKJ1HM-225	E CAPACITOR	2.2μF,5
C3072	NCB31EK-103X	CAPACITOR	0.01μF,25
C3073	NCB31EK-103X	CAPACITOR	0.01μF,25
C3074	NCB31EK-103X	CAPACITOR	0.01μF,25
C3075	NCB31EK-103X	CAPACITOR	0.01μF,25
C3076	NCB31EK-103X	CAPACITOR	0.01μF,25
C3077	QEKJ1CM-476	E CAPACITOR	47μF,16
C3078	NCB31EK-103X	CAPACITOR	0.01μF,25
C3079	NCB31EK-103X	CAPACITOR	0.01μF,25
C3080	QEKJ1HM-224	E CAPACITOR	0.22μF,50
C3081	QEKJ1HM-224	E CAPACITOR	0.22μF,50
C3082	QEKJ1HM-334	E CAPACITOR	0.33μF,50
C3083	NCB31EK-103X	CAPACITOR	0.01μF,25
C3084	NCB31EK-103X	CAPACITOR	0.01μF,25
C3085	QEKJ1HM-105	E CAPACITOR	1μF,50
C3086	QEKJ1HM-104	E CAPACITOR	0.1μF,50
C3087	NCT08CH-330A	CAPACITOR	33pF,50
C3088	NDC31HG-3R0X	CAPACITOR	3pF,50
C3089	NCB31CK-104X	CAPACITOR	0.1μF,16
C3090	QEKJ1HM-106	E CAPACITOR	10μF,50
C3091	QEKJ1HM-225	E CAPACITOR	2.2μF,50
C3092	NCB31CK-104X	CAPACITOR	0.1μF,16
C3093	QEKJ1EM-475	E CAPACITOR	4.7μF,25
C3094	NCB31EK-123A	CAPACITOR	0.012μF,25
C3095	NCB31CK-563A	CAPACITOR	0.056μF,16
C3096	QEKJ1HM-105	E CAPACITOR	1μF,50
C3097	NDC31HJ-101X	CAPACITOR	100pF,50
C3098	NDC31HJ-101X	CAPACITOR	100pF,50
C3099	NCB31CK-104X	CAPACITOR	0.1μF,16
C3100	QEKJ1CM-476	E CAPACITOR	47μF,16
C3101	NCB31EK-103X	CAPACITOR	0.01μF,25
C3103	NCB31CK-473X	CAPACITOR	0.047μF,16
C3104	NCT06CH-560A	CAPACITOR	56pF,50
C3105	NCB31EK-103X	CAPACITOR	0.01μF,25
C3106	NCB31EK-103X	CAPACITOR	0.01μF,25
C3107	NDC31HJ-101X	CAPACITOR	100pF,50
C3201	NDC31HJ-470X	CAPACITOR	47pF,50
C3202	NCB31EK-223X	CAPACITOR	0.022μF,25
C3203	NCB31EK-103X	CAPACITOR	0.01μF,25

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C3204	NDC31HJ-101X	CAPACITOR	100pF,50V
C3205	NDC31HJ-470X	CAPACITOR	47pF,50V
C3206	NDC31HJ-680X	CAPACITOR	68pF,50V
C3207	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3208	NDC31HJ-390X	CAPACITOR	39pF,50V
C3209	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3210	NDC31HJ-180X	CAPACITOR	18pF,50V
C3211	NCT06CH-270A	CAPACITOR	27pF,50V
C3212	NDC31HJ-330X	CAPACITOR	33pF,50V
C3213	NDC31HJ-180X	CAPACITOR	18pF,50V
C3214	NDC31HJ-220X	CAPACITOR	22pF,50V
C3215	NDC31HJ-470X	CAPACITOR	47pF,50V
C3216	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3217	NDC31HJ-150X	CAPACITOR	15pF,50V
C3218	NCT06CH-270A	CAPACITOR	27pF,50V
C3219	NDC31HJ-680X	CAPACITOR	68pF,50V
C3220	NDC31HJ-820X	CAPACITOR	82pF,50V
C3221	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
C3222	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3223	NDC31HJ-150X	CAPACITOR	15pF,50V
C3224	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3225	QEKJ1CM-476	E CAPACITOR	47µF,16V
C3226	NDC31HJ-150X	CAPACITOR	15pF,50V
C3301	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3302	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3303	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3304	QEKJ0JM-337	E CAPACITOR	330µF,6.3V
C3305	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3306	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3307	NDC31HG-5R0X	CAPACITOR	5pF,50V
C3308	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3309	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3310	QEKJ0JM-107	E CAPACITOR	100µF,6.3V
C3311	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
C3312	NCB31HK-102X	CAPACITOR	0.001µF,50V
C3313	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3314	NDC31HJ-470X	CAPACITOR	47pF,50V
C3315	NDC31HJ-470X	CAPACITOR	47pF,50V
C3316	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
C3318	NDC31HJ-470X	CAPACITOR	47pF,50V
C3319	NDC31HJ-470X	CAPACITOR	47pF,50V
C3320	NDC31HJ-470X	CAPACITOR	47pF,50V
C3321	NDC31HJ-470X	CAPACITOR	47pF,50V
C3322	NDC31HJ-470X	CAPACITOR	47pF,50V
C3323	NDC31HJ-470X	CAPACITOR	47pF,50V
C3324	NDC31HJ-470X	CAPACITOR	47pF,50V
C3325	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3327	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3328	NDC31HJ-470X	CAPACITOR	47pF,50V
C3329	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
C3330	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3331	QEKJ0JM-337	E CAPACITOR	330µF,6.3V
C3332	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3333	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3334	QEKJ0JM-337	E CAPACITOR	330µF,6.3V
C3335	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3336	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3337	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3338	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3339	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3340	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3341	NDC31HJ-470X	CAPACITOR	47pF,50V
C3342	NDC31HJ-470X	CAPACITOR	47pF,50V
C3343	NDC31HJ-470X	CAPACITOR	47pF,50V
C3344	NDC31HJ-470X	CAPACITOR	47pF,50V
C3345	NDC31HJ-470X	CAPACITOR	47pF,50V
C3346	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3347	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
C3348	QEKJ1HM-105	E CAPACITOR	1µF,50V
C3349	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3350	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3351	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3352	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3353	QEKJ1HM-474	E CAPACITOR	0.47µF,50V
C3354	QEKJ1HM-474	E CAPACITOR	0.47µF,50V
C3355	QENF1HM-105	NP E CAPACITOR	1µF,50V
C3356	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3357	QEKJ1CM-476	E CAPACITOR	47µF,16V
C3358	NDC31HJ-100X	CAPACITOR	10pF,50V
C3359	NDC31HJ-8R0X	CAPACITOR	8pF,50V
C3360	NDC31HJ-390X	CAPACITOR	39pF,50V
C3361	NDC31HJ-100X	CAPACITOR	10pF,50V
C3362	NDC31HJ-8R0X	CAPACITOR	8pF,50V
C3363	NDC31HJ-390X	CAPACITOR	39pF,50V
C3364	NDC31HJ-100X	CAPACITOR	10pF,50V
C3365	NDC31HJ-8R0X	CAPACITOR	8pF,50V
C3366	NDC31HJ-390X	CAPACITOR	39pF,50V
C3367	NCT06CH-6R0A	CAPACITOR	6pF,50V
C3368	NCT06CH-9R0A	CAPACITOR	9pF,50V
C3369	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3371	NDC31HJ-330X	CAPACITOR	33pF,50V
C3372	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3373	NDC31HJ-330X	CAPACITOR	33pF,50V
C3374	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3375	NDC31HJ-330X	CAPACITOR	33pF,50V
C3376	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3377	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3378	NDC31HJ-330X	CAPACITOR	33pF,50V
C3379	NDC31HJ-120X	CAPACITOR	12pF,50V
C3380	NCT06CH-6R0A	CAPACITOR	6pF,50V
C3381	NCT06CH-9R0A	CAPACITOR	9pF,50V
C3382	NDC31HJ-330X	CAPACITOR	33pF,50V
C3383	NDC31HJ-120X	CAPACITOR	12pF,50V
C3384	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3385	QEKJ1EM-335	E CAPACITOR	3.3µF,25V
C3387	QEKJ0JM-107	E CAPACITOR	100µF,6.3V
C3388	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3389	NCB31CK-104X	CAPACITOR	0.1µF,16V
C3391	NDC31HJ-8R0X	CAPACITOR	8pF,50V
C3392	NDC31HJ-8R0X	CAPACITOR	8pF,50V
C3393	NCB31EK-103X	CAPACITOR	0.01µF,25V
L3001	PELN0975-101JZ	COIL	100µH
L3002	PELN0975-101JZ	COIL	100µH
L3003	PELN0975-101JZ	COIL	100µH
L3004	PELN0975-101JZ	COIL	100µH
L3005	PU59988-101J	COIL	100µH
L3006	PU59988-470J	COIL	47µH
L3007	PU59988-100J	COIL	10µH
L3008	PU59988-560J	COIL	56µH
L3009	PU59988-101J	COIL	100µH
L3011	PU59988-151JY	COIL	150µH
L3012	PU59988-270J	COIL	27µH

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L3013	PELN0975-101JZ	COIL	100µH
L3014	PELN0975-101JZ	COIL	100µH
L3015	PELN0975-101JZ	COIL	100µH
L3016	PU59153-822J	COIL	8.2mH
L3201	PU59988-221J	COIL	220µH
L3202	PU48530-222J	COIL	2.2mH
L3203	PELN0975-101JZ	COIL	100µH
L3204	PU59988-330J	COIL	33µH
L3205	PU59988-150J	COIL	15µH
L3206	PU59988-270J	COIL	27µH
L3207	PU59988-270J	COIL	27µH
L3208	PU59988-560J	COIL	56µH
L3209	PU59988-180J	COIL	18µH
L3210	PU59988-390J	COIL	39µH
L3211	PU59988-100J	COIL	10µH
L3212	PU59988-221J	COIL	220µH
L3301	PELN0975-101JZ	COIL	100µH
L3302	PU59988-8R2JY	COIL	8.2µH
L3303	PELN0975-101JZ	COIL	100µH
L3304	PU48530-1R0K	COIL	1µH
L3305	PELN0975-101JZ	COIL	100µH
L3306	PU48530-1R0K	COIL	1µH
L3307	PELN0975-101JZ	COIL	100µH
L3308	PU59988-150J	COIL	15µH
L3309	PU59988-330J	COIL	33µH
L3310	PU59988-150J	COIL	15µH
L3311	PU59988-330J	COIL	33µH
L3312	PU59988-150J	COIL	15µH
L3313	PU59988-330J	COIL	33µH
L3314	PU59988-220JY	COIL	22µH
L3315	PU59988-330J	COIL	33µH
L3316	PU59988-220JY	COIL	22µH
L3317	PU59988-330J	COIL	33µH
L3318	PU59988-4R7JY	COIL	4.7µH
LC3001	PELN1165	LC TRAP	
LC3002	PELN1149	EQUALIZER	
LC3003	PELN1171	LC TRAP	
LC3301	PU59736-102	N FILTER	
LC3302	PU59736-331	N FILTER	
X3001	PEVB0550-Z	CRYSTAL RESONATOR	
BK1	LP40077-001A	BRACKET(PWB)	
SD1	LP30279-001B	SHIELD CASE(VIDEO)	
SD2	LP30280-001A	SHIELD PLATE(VIDEO)	
CN3001	PEMC0919-130K	PIN HEADER,(1-30)MAIN	
CN3002	PEMC0919-120K	PIN HEADER,(1-20)MAIN	

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TERMINAL BOARD ASSEMBLY <06>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PW1	PB10954E	TERMINAL BOARD ASSY	
IC1	CXA1410M-XE	IC	
IC3	NJM2234D	IC	
IC5	MM1228XF	IC	
IC6	TC7W02F	IC	
Q1	DTC144WU	TRANSISTOR	
Q2	2SA1577(QR)	TRANSISTOR	
Q3	2SA1577(QR)	TRANSISTOR	
Q4	2SA1577(QR)	TRANSISTOR	
Q5	2SA1577(QR)	TRANSISTOR	
Q6	2SC4097(QR)	TRANSISTOR	
D5	DAN202U	DIODE	
D7	1SS133	DIODE	
	or 1N4148M	DIODE	
D8	1SS133	DIODE	
	or 1N4148M	DIODE	
R1	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R11	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R12	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R13	QRD161J-471	RESISTOR	470Ω,1/6W
R14	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R15	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R16	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R21	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R22	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R23	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R24	QRE123J-391X	RESISTOR	390Ω,1/2W
R25	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R31	QRD161J-101	RESISTOR	100Ω,1/6W
R33	QRE123J-391X	RESISTOR	390Ω,1/2W
R34	QRD161J-271	RESISTOR	270Ω,1/6W
R35	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R36	QRE123J-391X	RESISTOR	390Ω,1/2W
R37	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R39	QRE123J-391X	RESISTOR	390Ω,1/2W
R40	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R41	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R43	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R44	NRVA02D-750X	CMF RESISTOR	75Ω,1/10W
R46	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R52	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R53	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R61	QRD161J-750	RESISTOR	75Ω,1/6W
R63	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R64	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R66	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R67	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R68	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R69	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R70	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R72	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R75	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
C1	QEKC1CM-106	E CAPACITOR	10µF,16V
C2	QEP61CM-106	NP E CAPACITOR	10µF,16V
C4	QEKC1CM-106	E CAPACITOR	10µF,16V
C5	QEP61CM-106	NP E CAPACITOR	10µF,16V
C6	QEKC0JM-476	E CAPACITOR	47µF,6.3V
C7	QCYA1HK-103	CAPACITOR	0.01µF,50V
C8	QEKC1CM-106	E CAPACITOR	10µF,16V
C9	QEKC1CM-106	E CAPACITOR	10µF,16V
C10	QCYA1HK-103	CAPACITOR	0.01µF,50V
C11	QEKC1CM-106	E CAPACITOR	10µF,16V
C14	QCYA1HK-103	CAPACITOR	0.01µF,50V
C15	QCYA1HK-103	CAPACITOR	0.01µF,50V
C16	QCYA1HK-103	CAPACITOR	0.01µF,50V
C17	QEKC1CM-476	E CAPACITOR	47µF,16V
C18	QEKC0JM-476	E CAPACITOR	47µF,6.3V
C19	QCYA1HK-103	CAPACITOR	0.01µF,50V
C20	QEKC1AM-476	E CAPACITOR	47µF,10V
C21	QCYA1HK-103	CAPACITOR	0.01µF,50V

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C22	QEKC1HM-105	E CAPACITOR	1μF,50V
	C23	QEP61HM-105	NP E CAPACITOR	1μF,50V
	C27	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C32	QEKC1HM-225	E CAPACITOR	2.2μF,50V
	C34	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C35	PECA0783-108MZ	E CAPACITOR	1000μF
	C36	PECA0783-108MZ	E CAPACITOR	1000μF
	C37	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C39	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C40	QEKC1CM-476	E CAPACITOR	47μF,16V
	C41	NDC21HJ-151X	CAPACITOR	150pF,50V
	C42	NDC21HJ-151X	CAPACITOR	150pF,50V
	C43	NDC21HJ-151X	CAPACITOR	150pF,50V
	C44	NDC21HJ-151X	CAPACITOR	150pF,50V
	C45	QETA0JM-477	E CAPACITOR	470μF,6.3V
	C46	NDC21HJ-151X	CAPACITOR	150pF,50V
	C47	NDC21HJ-151X	CAPACITOR	150pF,50V
	C48	NDC21HJ-151X	CAPACITOR	150pF,50V
	C49	NDC21HJ-151X	CAPACITOR	150pF,50V
	C50	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	C52	QETA0JM-477	E CAPACITOR	470μF,6.3V
	C53	NDC21HJ-330X	CAPACITOR	33pF,50V
	L1	PU48530-101K	COIL	100μH
	L2	PU48530-101K	COIL	100μH
	L3	PU48530-101K	COIL	100μH
	L5	PU48530-101K	COIL	100μH
	L6	QQL29BK-1R0Z	COIL	1μH
	LC1	PU59885-102	N FILTER	
	LC2	PU59885-102	N FILTER	
	LC3	PU59885-102	N FILTER	
	LC4	PU59885-102	N FILTER	
	LC5	PU59885-102	N FILTER	
	LC6	PU59885-102	N FILTER	
	LC7	PU59885-102	N FILTER	
	LC8	PU59885-102	N FILTER	
	S1	PU58486-1-1	SLIDE SWITCH,AV1 OUTSEL	
	JA1	PU59592	RGB21P SOCKET,AV1	
	JA2	PU59592	RGB21P SOCKET,AV2/DEC	
	JA3	PEMC0963	S JACK,S IN	
	JA4	PEMC0963	S JACK,S OUT	
	J1	ML-PU4010B	GND WIRE ASS'Y	
	TB1	PQ35456D	TERMINAL BOARD ASSY	
	OT1	SDSF3008Z	SCREW,X8	
	CN1	PEMC0970-212	CONNECTOR,(1-12)MAIN	
	CN2	PEMC0970-211	CONNECTOR(1-11)MAIN	
	CN3	PEMC0970-211	CONNECTOR(1-11)MAIN	

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DEMOD BOARD ASSEMBLY <14>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PW1	PB11032B	DEMOD BOARD ASSEMBLY	
	IC1501	UPC1391H	IC	
	IC1502	TDA9840	IC	
	R1506	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R1514	QRSA08J-391YN	RESISTOR	390Ω,1/10W
	R1515	QRSA08J-271YN	RESISTOR	270Ω,1/10W
	R1516	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R1518	QRSA08J-561YN	RESISTOR	560Ω,1/10W
	R1519	QRSA08J-471YN	RESISTOR	470Ω,1/10W
	R1521	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R1523	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R1524	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R1529	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R1530	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R1531	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R1532	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R1540	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R1541	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	VR1501	QVZ3521-103	V RESISTOR,SEPARATION	
	C1504	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C1505	QEKJ1CM-106	E CAPACITOR	10μF,16V
	C1506	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C1507	QEKJ1HM-104	E CAPACITOR	0.1μF,50V
	C1509	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C1510	QCTA1CH-220	CAPACITOR	22pF,16V
	C1511	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C1512	NCB21EK-473X	CAPACITOR	0.047μF,25V
	C1513	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C1514	NCB21HK-103X	CAPACITOR	0.01μF,50V
	C1515	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
	C1516	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
	C1518	QCTA1CH-330	CAPACITOR	33pF,16V
	C1519	QCTA1CH-330	CAPACITOR	33pF,16V
	C1523	NDC21HJ-181X	CAPACITOR	180pF,50V
	C1529	QEKJ1CM-106	E CAPACITOR	10μF,16V
	C1531	QEKJ1CM-106	E CAPACITOR	10μF,16V
	C1536	QEKJ1CM-336	E CAPACITOR	33μF,16V
	C1556	QCTA1CH-101	CAPACITOR	100pF,16V
	C1557	QCTA1CH-101	CAPACITOR	100pF,16V
	L1502	PU59152-1R0J	COIL	1μH
	CF1503	PEVB0677	C DISCRIMINATER	
	CF1504	PU52775-2	CERAMIC FILTER	
	X1501	PEVB0479	CRYSTAL RESONATOR	
	T1501	QQR0583-001	LC FILTER	
	SD1	PQ35057	SHIELD FRAME	
	CN1501	PEMC0712-105	PIN HEADER,(1-5)MAIN	
	CN1502	PEMC0712-105	PIN HEADER,(1-5)MAIN	

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DISPLAY BOARD ASSEMBLY <28>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PW1	PB11059A1	DISPLAY BOARD ASSY
⚠	IC1201	UPD16312GB(P)	IC
⚠		or UPD16312GB(M)	IC

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	IC1202	GP1U281X	IR DETECT UNIT	
		or PIC-21143TE5	IR DETECT UNIT	
		or PNA4652M00XB	IR DETECT UNIT	
	D1201	1SS133	DIODE	
		or 1N4148M	DIODE	
	D1202	1SS133	DIODE	
		or 1N4148M	DIODE	
	D1203	1SS133	DIODE	
		or 1N4148M	DIODE	
	D1204	1SS133	DIODE	
		or 1N4148M	DIODE	
	D1207	RD9.1ES-T1B2	ZENER DIODE	
	D1208	SLR-342MG3F	LE DIODE,AUTO SP/LP	
	D1210	SLR-56DU3F	LE DIODE,TIME SCAN1	
	D1211	SLR-56DU3F	LE DIODE,TIME SCAN2	
	R1201	QRD161J-103	RESISTOR	10kΩ,1/6W
	R1202	QRD161J-103	RESISTOR	10kΩ,1/6W
	R1203	QRD161J-103	RESISTOR	10kΩ,1/6W
	R1204	QRD161J-103	RESISTOR	10kΩ,1/6W
	R1205	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R1206	QRD161J-102	RESISTOR	1kΩ,1/6W
	R1207	QRD161J-471	RESISTOR	470Ω,1/6W
	R1208	QRD161J-563	RESISTOR	56kΩ,1/6W
	R1209	QRD161J-103	RESISTOR	10kΩ,1/6W
	R1210	QRD161J-103	RESISTOR	10kΩ,1/6W
	R1211	QRD161J-103	RESISTOR	10kΩ,1/6W
	R1212	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R1214	QRD161J-333	RESISTOR	33kΩ,1/6W
⚠	R1217	QRE141J-471Y	RESISTOR	470Ω,1/4W
	R1218	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R1219	QRD161J-471	RESISTOR	470Ω,1/6W
	R1220	QRD161J-471	RESISTOR	470Ω,1/6W
	R1221	QRD161J-333	RESISTOR	33kΩ,1/6W
	R1222	QRD161J-333	RESISTOR	33kΩ,1/6W
	R1223	QRD161J-333	RESISTOR	33kΩ,1/6W
	R1224	QRD161J-333	RESISTOR	33kΩ,1/6W
	C1201	QETC1CM-476	E CAPACITOR	47µF,16V
	C1202	QCFB1HZ-104	CAPACITOR	0.1µF,50V
	C1203	QEKJ0JM-227	E CAPACITOR	220µF,6.3V
	C1204	QCSB1HJ-470	CAPACITOR	47pF,50V
	C1205	QCSB1HJ-330	CAPACITOR	33pF,50V
	C1206	QETC1HM-106	E CAPACITOR	10µF,50V
	C1207	QCBB1HK-102	CAPACITOR	0.001µF,50V
	C1211	QCVB1CM-103	CAPACITOR	0.01µF,16V
	L1201	PU48530-331K	COIL	330µH
	S1201	PESW0525-02Z	TACT SWITCH,AUTO SP/LP	
	S1202	PESW0525-02Z	TACT SWITCH,REC	
	S1203	PESW0525-02Z	TACT SWITCH,PAUSE	
	S1204	PESW0525-02Z	TACT SWITCH,SP/LP	
	S1205	PESW0525-02Z	TACT SWITCH,STOP/EJECT	
	S1206	PESW0525-02Z	TACT SWITCH,PLAY	
	S1207	PESW0525-02Z	TACT SWITCH,REW	
	S1208	PESW0525-02Z	TACT SWITCH,FF	
	DI1201	QLF0007-001	FL TUBE	
	HD1	PQ34668	FDP HOLDER(L),DI1201	
	HD2	PQ34669	FDP HOLDER(R),DI1201	
	HD3	PQM30038-5	LED HOLDER,DI1208	
	FW1201	PW30101-80AA442	PARALLEL WIRE	
	FW1202	PW30101-60AA443	PARALLEL WIRE	
	CN1201	PEMC1102-113	FFC CONNECTOR,(1-13)MAIN	
	CN1202	PEMC0889-013	CONNECTOR,(1-13)SW/JACK	

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	CN1204	PEMC0918-115	FFC CONNECTOR

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REC SAFETY SWITCH BOARD ASSEMBLY <32>

PW4	PB11059A4	REC SAFETY SWITCH BOARD ASSY
S1241	PESW0589	PUSH SWITCH

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CASSETTE SWITCH BOARD ASSEMBLY <33>

PW3	PB11059A3	CASSETTE SWITCH BOARD ASSY
S1242	PU61320	PUSH SWITCH,CASS SW
S1243	PU61320	PUSH SWITCH,S CASS SW

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SW/JACK BOARD ASSEMBLY <36>

	PW2	PB11059A2	SW/JACK BOARD ASSY	
	D1235	1SS133	DIODE	
		or 1N4148M	DIODE	
	D1236	1SS133	DIODE	
		or 1N4148M	DIODE	
	D1237	1SS133	DIODE	
		or 1N4148M	DIODE	
	D1238	1SS133	DIODE	
		or 1N4148M	DIODE	
	D1239	SLR-55VC3F	LE DIODE	
	D1241	1SS133	DIODE	
		or 1N4148M	DIODE	
⚠	R1229	QRD161J-471	RESISTOR	470Ω,1/6V
	R1231	QRD161J-680	RESISTOR	68Ω,1/6V
	R1232	QRD161J-680	RESISTOR	68Ω,1/6V
	R1233	QRD161J-221	RESISTOR	220Ω,1/6V
	R1234	QRD161J-221	RESISTOR	220Ω,1/6V
	R1235	QRD161J-221	RESISTOR	220Ω,1/6V
	R1236	QRD161J-221	RESISTOR	220Ω,1/6V
	R1237	QRD161J-221	RESISTOR	220Ω,1/6V
	R1238	QRD161J-221	RESISTOR	220Ω,1/6V
	VR1201	PERE0483-02	V RESISTOR,HD VOLUME	
	VR1202	PERE0513	V RESISTOR,REC LEVEL	
	C1221	QCBB1HK-102	CAPACITOR	0.001µF,50
	C1222	QCBB1HK-102	CAPACITOR	0.001µF,50
	C1223	QCBB1HK-102	CAPACITOR	0.001µF,50
	C1224	QCBB1HK-102	CAPACITOR	0.001µF,50
	C1225	QCVB1CM-103	CAPACITOR	0.01µF,16
	C1226	QCVB1CM-103	CAPACITOR	0.01µF,16
	C1227	QCVB1CM-103	CAPACITOR	0.01µF,16
	C1228	QCVB1CM-103	CAPACITOR	0.01µF,16
	L1202	PU59152-3R3J	COIL	3.3µ
	L1203	PU59152-120J	COIL	12µ
	L1204	PU59152-120J	COIL	12µ

⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L1207	PU59152-4R7J	COIL	4.7µH
L1208	PU59152-4R7J	COIL	4.7µH
S1211	PESW0525-02Z	TACT SWITCH,RAE IN/OUT	
S1212	PESW0525-02Z	TACT SWITCH,START	
S1213	PESW0525-02Z	TACT SWITCH,POWER	
S1214	PESW0525-02Z	TACT SWITCH,TIMER	
S1215	PESW0525-02Z	TACT SWITCH,SPATIALIZ	
S1216	PESW0525-02Z	TACT SWITCH,AV/S SEL	
S1218	PESW0525-02Z	TACT SWITCH,A DUB	
S1219	PESW0525-02Z	TACT SWITCH,INSERT	
S1220	PESW0551	SLIDE SWITCH,P/MES	
K1202	PU59152-1R0J	COIL	1µH
J1201	PEMC1063-04	PIN JACK(SW),VIDEO	
J1202	PEMC1063-03	PIN JACK(SW),AUDIO(L)	
J1203	PEMC1063-02	PIN JACK(SW),AUDIO(R)	
J1204	PU60452-2	MINI JACK,HEAD PHONE	
J1205	PEMC1190	MINI JACK,JLIP	
CN1203	PEMC0825-013	CONNECTOR,(1-13)DISPLAY/SW	
CN1204	PEMC1102-115	FFC CONNECTOR,(1-15)MAIN	
CN1205	PU59555-2	CONNECTOR,(1-2)GND	

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PRE/REC BOARD ASSEMBLY <43>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PW1	PB11030G-01	PRE/REC BOARD ASSY	
IC501	LA7257	IC	
IC2701	HA118191ANT	IC	
Q501	DTC114WU	TRANSISTOR	
Q502	DTA144WU	TRANSISTOR	
Q503	2SC4081(QRS)	TRANSISTOR	
Q1701	2SA1576(QRS)	TRANSISTOR	
Q1702	2SA1576(QRS)	TRANSISTOR	
Q1703	DTC144WU	TRANSISTOR	
Q1704	2SA1576(QRS)	TRANSISTOR	
Q2701	2SC4081(QRS)	TRANSISTOR	
Q2702	DTC143EU	TRANSISTOR	
Q2703	DTC144WU	TRANSISTOR	
Q2705	2SC4081(QRS)	TRANSISTOR	
Q2706	2SC4081(QRS)	TRANSISTOR	
Q2707	2SC4103(PQ)	TRANSISTOR	
Q2714	2SA1576(QRS)	TRANSISTOR	
Q2715	2SK433(D)	TRANSISTOR	
Q2716	2SC4081(QRS)	TRANSISTOR	
Q2717	2SC4081(QRS)	TRANSISTOR	
Q2718	2SA1576(QRS)	TRANSISTOR	
Q2719	2SC4081(QRS)	TRANSISTOR	
Q2720	DTC144WU	TRANSISTOR	
Q2801	2SC4081(QRS)	TRANSISTOR	
Q2802	DTC144EU	TRANSISTOR	
Q2803	2SC4081(QRS)	TRANSISTOR	
Q2804	2SC4081(QRS)	TRANSISTOR	
Q2805	DTC144WU	TRANSISTOR	
D501	1N4148M	DIODE	
	or 1SS133	DIODE	
D502	1N4148M	DIODE	
	or 1SS133	DIODE	
D503	1N4148M	DIODE	
	or 1SS133	DIODE	
D2701	1SS355	DIODE	
D2702	1SS355	DIODE	
D2703	1SS355	DIODE	
D2704	1N4148M	DIODE	
	or 1SS133	DIODE	
D2705	1N4148M	DIODE	
	or 1SS133	DIODE	
D2706	1N4148M	DIODE	
	or 1SS133	DIODE	
D2708	1SS355	DIODE	
R501	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R502	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R504	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R506	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R507	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R508	QRD161J-152	RESISTOR	1.5kΩ,1/6W
R509	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R510	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R511	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R512	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R513	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R514	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R515	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
VR501	QVPA603-332Z	V RESISTOR,A REC FM ADJ	
R1701	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R1702	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R1703	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R1704	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R1705	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R1706	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R1707	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R1708	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R2701	QRSA08J-910YN	RESISTOR	91Ω,1/10W
R2702	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R2703	NRVA02D-130X	CMF RESISTOR	13Ω,1/10W
R2704	QRSA08J-910YN	RESISTOR	91Ω,1/10W
R2705	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R2706	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R2707	QRSA08J-820YN	RESISTOR	82Ω,1/10W
R2708	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2709	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2710	QRD161J-221	RESISTOR	220Ω,1/6W
R2711	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R2712	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2713	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R2716	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R2717	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R2718	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R2719	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R2720	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R2721	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R2722	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R2723	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R2724	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R2725	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R2727	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R2728	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2730	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R2731	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R2735	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2736	QRD161J-681	RESISTOR	680Ω,1/6W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R2737	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R2738	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R2739	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R2740	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R2741	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2742	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R2743	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R2744	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2745	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R2746	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R2747	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R2748	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R2749	QRSA08J-620YN	RESISTOR	62Ω,1/10W
R2750	QRSA08J-301YN	RESISTOR	300Ω,1/10W
R2751	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R2752	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2753	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R2754	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R2755	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R2756	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R2758	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2759	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2801	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R2802	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2803	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2804	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R2805	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R2806	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R2807	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2808	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R2809	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R2810	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R2811	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R2812	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R2813	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2815	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
C501	QCFA1EZ-104	CAPACITOR	0.1µF,25V
C502	NCB21HK-103X	CAPACITOR	0.01µF,50V
C503	QCFA1EZ-104	CAPACITOR	0.1µF,25V
C504	NCB21HK-103X	CAPACITOR	0.01µF,50V
C505	NCB21HK-102X	CAPACITOR	0.001µF,50V
C506	NCB21HK-103X	CAPACITOR	0.01µF,50V
C507	NCB21HK-102X	CAPACITOR	0.001µF,50V
C508	QCYA1HK-221	CAPACITOR	220pF,50V
C509	NCB21EK-563X	CAPACITOR	0.056µF,25V
C511	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
C512	QCYA1HK-221	CAPACITOR	220pF,50V
C513	NDC21HJ-101X	CAPACITOR	100pF,50V
C514	NCB21HK-103X	CAPACITOR	0.01µF,50V
C516	NCB21EK-104X	CAPACITOR	0.1µF,25V
C517	NCB21EK-104X	CAPACITOR	0.1µF,25V
C1701	NCB21EK-223X	CAPACITOR	0.022µF,25V
C1702	NDC21HJ-121X	CAPACITOR	120pF,50V
C1703	QCTA1CH-470	CAPACITOR	47pF,16V
C1705	NCB21HK-102X	CAPACITOR	0.001µF,50V
C1706	NDC21HJ-150X	CAPACITOR	15pF,50V
C1707	NCB21HK-103X	CAPACITOR	0.01µF,50V
C1708	QEKJ1CM-106	E CAPACITOR	10µF,16V
C2701	QCFA1EZ-104	CAPACITOR	0.1µF,25V
C2702	NCF21CZ-224X	CAPACITOR	0.22µF,16V
C2703	QCTA1CH-300	CAPACITOR	30pF,16V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C2704	NDC21HJ-270X	CAPACITOR	27pF,50
C2705	NCF21CZ-224X	CAPACITOR	0.22µF,1
C2706	QCFA1EZ-104	CAPACITOR	0.1µF,2
C2707	QCFA1EZ-104	CAPACITOR	0.1µF,2
C2708	NDC21HJ-240X	CAPACITOR	24pF,50
C2709	NCF21CZ-224X	CAPACITOR	0.22µF,1
C2710	NCF21CZ-224X	CAPACITOR	0.22µF,1
C2711	NDC21HJ-240X	CAPACITOR	24pF,50
C2712	QCFA1EZ-104	CAPACITOR	0.1µF,2
C2713	QEKJ1HM-105	E CAPACITOR	1µF,50
C2714	NCB21EK-223X	CAPACITOR	0.022µF,2
C2715	QEKJ1CM-476	E CAPACITOR	47µF,1
C2716	QCFA1EZ-104	CAPACITOR	0.1µF,2
C2718	NCF21CZ-334X	CAPACITOR	0.33µF,1
C2719	NCB21HK-103X	CAPACITOR	0.01µF,50
C2720	NCB21HK-103X	CAPACITOR	0.01µF,50
C2724	NCB21HK-103X	CAPACITOR	0.01µF,50
C2725	NDC21HJ-151X	CAPACITOR	150pF,50
C2726	NDC21HJ-331X	CAPACITOR	330pF,50
C2729	NDC21HJ-391X	CAPACITOR	390pF,50
C2730	NCB21EK-223X	CAPACITOR	0.022µF,2
C2731	QEKJ1CM-476	E CAPACITOR	47µF,1
C2732	NCB21EK-223X	CAPACITOR	0.022µF,2
C2733	QEKJ1CM-476	E CAPACITOR	47µF,1
C2734	NCB21HK-103X	CAPACITOR	0.01µF,50
C2735	NCB21HK-102X	CAPACITOR	0.001µF,50
C2736	NDC21HJ-151X	CAPACITOR	150pF,50
C2739	NCB21HK-103X	CAPACITOR	0.01µF,50
C2740	NCB21HK-103X	CAPACITOR	0.01µF,50
C2742	NCF21CZ-105X	CAPACITOR	1µF,1
C2744	NCF21CZ-105X	CAPACITOR	1µF,1
C2749	QCFA1EZ-104	CAPACITOR	0.1µF,2
C2751	NDC21HJ-361X	CAPACITOR	360pF,50
C2752	NCB21HK-103X	CAPACITOR	0.01µF,50
C2754	QCFA1EZ-104	CAPACITOR	0.1µF,2
C2755	NCB21HK-103X	CAPACITOR	0.01µF,50
C2757	NCB21HK-103X	CAPACITOR	0.01µF,50
C2758	QCYA1HK-122	CAPACITOR	0.0012µF,50
C2759	NDC21HJ-101X	CAPACITOR	100pF,50
C2760	NDC21HJ-331X	CAPACITOR	330pF,50
C2762	NCB21HK-103X	CAPACITOR	0.01µF,50
C2763	QEKJ1CM-476	E CAPACITOR	47µF,1
C2764	NCB21HK-103X	CAPACITOR	0.01µF,50
C2801	NCB21HK-103X	CAPACITOR	0.01µF,50
C2802	NCB21HK-103X	CAPACITOR	0.01µF,50
C2803	NDC21HJ-180X	CAPACITOR	18pF,50
C2804	NDC21HJ-151X	CAPACITOR	150pF,50
C2805	NDC21HJ-680X	CAPACITOR	68pF,50
C2806	NCB21HK-103X	CAPACITOR	0.01µF,50
C2807	NDC21HJ-220X	CAPACITOR	22pF,50
C2808	NCB21HK-103X	CAPACITOR	0.01µF,50
C2809	NCB21HK-103X	CAPACITOR	0.01µF,50
L501	PELN0975-100JZ	COIL	10µ
L502	PU59988-151JY	COIL	150µ
L1701	PU59988-150J	COIL	15µ
L1702	PELN0975-101JZ	COIL	100µ
L2701	PU59988-221J	COIL	220µ
L2702	PU59988-221J	COIL	220µ
L2703	PELN0975-101JZ	COIL	100µ
L2704	PU59988-560J	COIL	56µ
L2706	PU59988-181J	COIL	180µ

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
L2707	PU59988-151JY	COIL	150μH
L2709	PELN0975-101JZ	COIL	100μH
L2710	PELN0975-101JZ	COIL	100μH
L2711	PU59988-100J	COIL	10μH
L2712	PU59988-470J	COIL	47μH
L2713	PU59988-180J	COIL	18μH
L2714	PELN0975-101JZ	COIL	100μH
L2801	PU59988-560J	COIL	56μH
L2802	PU59988-470J	COIL	47μH
CN2701	PEMC1057-011	CONNECTOR,(1-11)UPPER DRUM	
CN2702	PEMC1167-113	CONNECTOR,(1-13)MAIN	
CN2703	PEMC1167-116	CONNECTOR,(1-16)MAIN	

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VSC BOARD ASSEMBLY <72>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PW1	PB10995A-01	VSC BOARD ASSEMBLY	
IC2501	LC85401E	IC	
	or LC85401ED	IC	
IC2502	LC32256P-80	IC	
	or LC32256P-80-A	IC	
Q2501	2SC4081(QRS)	TRANSISTOR	
Q2502	DTC144WU	TRANSISTOR	
D2501	1N4148M	DIODE	
	or 1SS133	DIODE	
	or MA165	DIODE	
R2501	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2502	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R2503	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R2504	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R2505	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R2506	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R2507	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2508	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R2509	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R2510	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R2511	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R2512	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2513	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2514	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R2515	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2516	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R2518	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2519	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R2520	QRSA08J-101YN	RESISTOR	100Ω,1/10W
C2501	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
C2502	QCYA1HK-562	CAPACITOR	0.0056μF,50V
C2503	QEKJ1HM-105	E CAPACITOR	1μF,50V
C2505	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
C2506	QCYA1HK-103	CAPACITOR	0.01μF,50V
C2507	QEKJ1CM-226	E CAPACITOR	22μF,16V
C2508	QCYA1HK-103	CAPACITOR	0.01μF,50V
C2509	QEKJ1CM-106	E CAPACITOR	10μF,16V
C2510	QEKJ1CM-476	E CAPACITOR	47μF,16V
C2511	QCYA1HK-222	CAPACITOR	0.0022μF,50V
C2513	QCYA1HK-103	CAPACITOR	0.01μF,50V
C2514	QCYA1HK-103	CAPACITOR	0.01μF,50V
L2501	PELN0975-2R2JZ	COIL	2.2μH
LPF2501	PELN1137	LOW PASS FILTER	
CF2501	PEVB0671	RESONATOR	
LC2501	PU59736-103	N FILTER	
CN2501	PEMC0712-109	PIN HEADER,(1-9)MAIN	

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JOG BOARD ASSEMBLY <85>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
PW5	PB11059A5	JOG BOARD ASSY
UN1211	PEME0976	JOG ASSY
CN1211	PEMC1101-105	FFC CONNECTOR,(1-5)MAIN

SECTION 6
TECHNICAL INFORMATION

6. SYSCON CIRCUIT

6.1.1 Syscon CPU pin function (IC701) 1/2

PIN NO	LABEL	IN/OUT	NOTE
1	S. CURVE	IN	TUNING CHECK
2	AVRG FM	IN	AUTO TRACKING DETECT (AVERAGE VOLTAGE OF PB FM LEVEL INPUT)
3	P. DOWN	IN	POWER DOWN DETECT (POWER DOWN: H to L)
4	6.5H DET	IN	PB SWITCHING POINT ADJUST PULSE
5	AVSS	-	GND
6	TEST	-	GND
7	X2	-	TIMER CLOCK (32.768 kHz)
8	X1	-	TIMER CLOCK (32.768 kHz)
9	VSS	-	GND
10	OSC1	-	SYSTEM CLOCK (10 MHz)
11	OSC2	-	SYSTEM CLOCK (10 MHz)
12	RESET (L)	-	RESET AT CONNECT VCR TO AC
13	(NMI)	-	NC
14	LSC	IN	MECHANISM MODE DETECT (C)
15	LSB	IN	MECHANISM MODE DETECT (B)
16	LSA	IN	MECHANISM MODE DETECT (A)
17	C.L. END	IN	CASSETTE TAPE LOAD SWITCH (CASSETTE IN: L)
18	RECSF	IN	REC SAFETY SWITCH DETECT (SW ON: L)
19	STTS	IN	LEADER TAPE DETECT (DETECT ON: L)
20	ENDS	IN	TRAILER TAPE DETECT (DETECT ON: L)
21	R. PAUSE	IN	REMOTE PAUSE CTL (PAUSE ON: L)
22	TU FG	IN	TAKE-UP REEL ROTATION DET/TAPE REMAIN
23	SUP FG	IN	SUPPLY REEL ROTATION DET/TAPE REMAIN
24	A. MUTE	OUT	AUDIO MUTE CONTROL (MUTE ON: H)
25	DD CS	OUT	CHIP SELECT to DD CPU
26	DD BUSY	IN	DATA TRANSMIT PERMISSION from DD CPU
27	DD RESET	OUT	RESET PULSE to DD CPU
28	PLL DATA	OUT	TUNING IC DATA
29	SECAM VL(H)	OUT	SECAM TUNER VL CONTROL (VL: H)
30	PLL CE	OUT	TUNING IC CHIP ENABLE
31	N. REC ST(H)	OUT	REC START: H
32	V. REC ST(L)	OUT	VIDEO REC START: L
33	H. REC ST (L)	OUT	HiFi AUDIO REC START: L
34	A/M/S	OUT	PRE/REC CIRCUIT CONTROL (AUTO: M/MANUAL: H/S&S: L)
35	H SEL	OUT	HEAD SELECT CONTROL (SP: L/LP: M/EP: H)
36	DUTY I/O	IN/OUT	IN/OUT INDEX DATA CONTROL
37	A. WIDE(H)	OUT	AUDIO EFECT CONTROL (AUDIO WIDE: H)
38	REC(H)	OUT	REC MODE: H
39	H SEL SPL	IN	HEAD SELECT CONTROL (SP: L/LP: M/EP: H)
40	DET S	IN	S-VHS MODE DETECT (S-VHS: H)

Table 6-1-1 SYSCON CPU pin function(1/2)

6.1.2 Syscon CPU pin function (IC701) 2/2

PIN NO	LABEL	IN/OUT	NOTE
41	S CASS IN	IN	S-VHS CASSETTE INSERT DETECT
42	EXP DATA	OUT	EXPANDER IC (IC705) DATA OUTPUT
43	I2C CLK	OUT	DATA TRANSFER CLOCK to ON SCREEN, AUDIO, TUNER AND EEPROM IC
44	I2C DATA	IN/OUT	DATA INPUT from ON SCREEN, AUDIO, TUNER AND EEPROM IC
45	VPCTL	OUT	V. PULSE ADDITION TIMING CONTROL
46	SYNC DET	OUT	SYNC DETECT (NO SYNC: H)
47	P. MUTE(L)	OUT	PICTURE MUTE CONTROL (MUTE ON: L)
48	SECAM DET	-	NC
49	LOCK DET	IN	TUNING LOCK CHECK
50	RC IN	IN	REMOTE CONTROL DATA INPUT
51	FLYST(L)	OUT	FLYING ERASE HEAD CONTROL (START: L)
52	CTL C/D	IN	CTL PULSE INPUT (MODE DETECT/BLANK PORTION DET)
53	RAE OUT	OUT	REMOTE PAUSE CONTROL OUTPUT
54	CAP REV	OUT	CAPSTAN MOTOR CONTROL (FWD: H/REV: L)
55	OSD CS	OUT	CPU CHIP SELECT to ON SCREEN CPU
56	COM CLOCK	OUT	DATA TRANSFER CLOCK OUTPUT for EXPAND IC AND TUNER
57	S OUT	OUT	SERIAL DATA OUTPUT to DISPLAY CPU, ON SCREEN CPU AND DD CPU
58	S IN	IN	SERIAL DATA INPUT from DISPLAY CPU, ON SCREEN CPU AND DD CPU
59	S CLK	OUT	SERIAL DATA TRANSFER CLOCK for DISPLAY CPU, ON SCREEN CPU AND DD CPU
60	V. UP(H)	OUT	CAPSTAN MOTOR SPEED CONTROL (VOLTAGE UP CONTROL: M12V(L) TO M17V(H)
61	STB/DOCTOR	OUT	CLOCK OUTPUT PERMISSION to DISPLAY CPU/DOCTOR ON
62	BPF SW (H)	OUT	BAND PASS FILTER SW CONTROL (BPF ON: H)
63	VCC	-	SYSTEM POWER
64	S DATA	OUT	SERIAL DTA OUTPUT for SERVO CPU
65	LCM3	OUT	LOADING MOTOR DRIVE (3)
66	PAUSE	OUT	CAPSTAN MOTOR CONTROL (PAUSE: L)
67	CTL CLOCK	IN	INDEX CONTROL CLOCK INPUT
68	LCM2	OUT	LOADING MOTOR DRIVE (2)
69	CAPFG	IN	TAPE SPEED DETECT/BACK SPACE COUNT
70	LCM1	OUT	LOADING MOTOR DRIVE (1)
71	D. FF	IN	DRUM ROTATION DETECT/ REC TIMING CONTROL
72	AVCC	-	SYSTEM POWER (FOR ANALOG)
73	SCR IN	IN	SCRAMBLE CONTROL INPUT (SCRAMBLE: L)
74	PROTECT	IN	SWD5V/12V DETECT
75	DRUM V	OUT	DRUM MOTOR CONTROL
76	CAP V	OUT	CAPSTAN MOTOR CONTROL
77	A. ENV/ND(L)	IN	FMA PB FM SIGNAL AND NORMAL AUDIO DETECT (NORMAL AUDIO: L)
78	IF AGC	IN	IF AGC DETECT
79	A. LVL. L	IN	AUDIO INDICATOR LEVEL INPUT (L ch)
80	A. LVL. R	IN	AUDIO INDICATOR LEVEL INPUT (R ch)

Table 6-1-2 SYSCON CPU pin function(2/2)